UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

TOUCHTUNES MUSIC CORP., Plaintiff, v. ROWE INTERNATIONAL CORP., ARACHNID, INC., AMI ENTERTAINMENT, INC. and MERIT INDUSTRIES, INC. d/b/a/ MERIT ENTERTAINMENT, Defendants.	Civil Action No. 07-cv-11450-RWS
AND RELATED COUNTERCLAIMS	

LOCAL RULE 56.1 STATEMENT OF MATERIAL FACTS
IN SUPPORT OF TOUCHTUNES' MOTION FOR
SUMMARY JUDGMENT OF NONINFRINGEMENT

Pursuant to the Court's Local Civil Rule 56.1, TouchTunes Music Corp. ("TouchTunes") submits this Statement of Material Facts in support of its Motion for Summary Judgment of Noninfringement.

I. Glossary

The following table presents definitions for certain words and phrases used in this Statement of Material Facts.

TERM	DEFINITION
'189 patent	U.S. Patent No. 6,397,189 (attached as Exh. 1 to the Declaration of Jonathon Reavill ("Reavill Decl.")) [1]
'575 patent	U.S. Patent No. 6,381,575 (attached as Exh. 3 to Reavill Decl.)
'398 patent	U.S. Patent No. 5,848,398 (attached as Exh. 5 to Reavill Decl.)
'834 patent	U.S. Patent No. 6,970,834 (attached as Exh. 7 to Reavill Decl.)
asserted patents	U.S. Patent No. 6,397,189; U.S. Patent No. 6,381,575; U.S. Patent No. 5,848,398; and U.S. Patent No. 6,970,834
'189 Reexam Resp.	March 18, 2009 Reexamination Office Action Response in Reexamination Control No. 90/010,094 (regarding the '189 patent) (attached as Exh. 17 to Reavill Decl.)
'575 Reexam Resp.	March 18, 2009 Reexamination Office Action Response in Reexamination Control No. 90/010,097 (regarding the '575 patent) (attached as Exh. 18 to Reavill Decl.)
'398 Reexam Resp.	March 18, 2009 Reexamination Office Action Response in Reexamination Control No. 90/010,147 (regarding the '398 patent) (attached as Exh. 19 to Reavill Decl.)
'834 Reexam Resp.	March 18, 2009 Reexamination Office Action Response in Reexamination Control No. 90/010,095 (regarding the '834 patent) (attached as Exh. 20 to Reavill Decl.)
'189 Reexam Appeal Br.	October 13, 2009 Appeal Brief in Reexamination Control No. 90/010,094 (regarding the '189 patent) (attached as Exh. 22 to Reavill Decl.)
'575 Reexam Appeal Br.	October 13, 2009 Appeal Brief in Reexamination Control No. 90/010,097 (regarding the '575 patent) (attached as Exh. 23 to Reavill Decl.)
'398 Reexam Appeal Br.	October 13, 2009 Appeal Brief in Reexamination Control No. 90/010,147 (regarding the '398 patent) (attached as Exh. 24 to Reavill Decl.)
'834 Reexam Appeal Br.	October 13, 2009 Appeal Brief in Reexamination Control No. 90/010,095 (regarding the '834 patent) (attached as Exh. 25 to

[1] Unless otherwise indicated, all citations herein to "Exh. ___" are citations to exhibits to the Declaration of Jonathon Reavill submitted in support of TouchTunes' Motion for Summary Judgment of Noninfringement.

TERM	DEFINITION
	Reavill Decl.)
'189 Reexam Reply Br.	March 8, 2010 Reply Brief in Reexamination Control No. 90/010,094 (regarding the '189 patent) (attached as Exh. 26 to Reavill Decl.)
'575 Reexam Reply Br.	February 17, 2010 Reply Brief in Reexamination Control No. 90/010,097 (regarding the '575 patent) (attached as Exh. 27 to Reavill Decl.)
'398 Reexam Reply Br.	February 1, 2010 Reply Brief in Reexamination Control No. 90/010,147 (regarding the '398 patent) (attached as Exh. 28 to Reavill Decl.)
'834 Reexam Reply Br.	February 1, 2010 Reply Brief in Reexamination Control No. 90/010,095 (regarding the '834 patent) (attached as Exh. 29 to Reavill Decl.)
PTO; Patent Office	U.S. Patent and Trademark Office
Ramone Declaration; Ramone Decl.	Declaration of Phil Ramone
Rice Declaration; Rice Decl.	March 17, 2009 Declaration of Patrick Rice (attached as Exh. 21 to Reavill Decl.)
Tooker Declaration; Tooker Decl.	Declaration of Michael Tooker

II. Material Facts

A. The Agreed Requirement for "Studio Quality Musical Recordings"

1. All of the asserted patents require the use of a very specific type of "song."

See, e.g., Defendant Arachnid's Opening Claim Construction Mem. at 7 (attached as Exh. 11); Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2 (attached as Exh. 12).

2. The parties have expressly agreed that, as used in the asserted patents, the term "song(s)" means "studio quality musical recording(s)."

See, e.g., Defendant Arachnid's Opening Claim Construction Mem. at 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2.

3. The parties agree that all claims of the asserted patents require songs that are in the form of "studio quality musical recordings."

See, e.g., Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; '189 Reexam Resp. at 31-32; '575 Reexam Resp. at 30-32; '398 Reexam Resp. at 22; '834 Reexam Resp. at 17-18.

4. The asserted patents are all directed to computer jukeboxes that, among other things, download, store and play songs.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of Correction; Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Br. at 2; '189 Reexam Resp. at 31-32; '575 Reexam Resp. at 30-31; '398 Reexam Resp. at 22; '834 Reexam Resp. at 17-18; Rice Decl. ¶¶ 1, 3.

5. Every claim of the asserted patents requires a computer jukebox.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of Correction; *see also* Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Br. at 2 ; '189 Reexam Resp. at 31-32; '575 Reexam Resp. at 30-31; '398 Reexam Resp. at 22; '834 Reexam Resp. at 17-18; Rice Decl. ¶¶ 1, 3.

6. Both TouchTunes and Arachnid accept the following definition for the claim term "computer jukebox(es)" in the '575, '189, '834 and '398 patents:

> A stand-alone unit operable solely by a patron, including a money intake unit, that plays and is capable of playing songs, as that term is used herein.

TouchTunes Opening Claim Construction Br. at 4-5 (attached as Exh. 9); Exh. 10 to 10/05/09 Declaration of Joseph S. Presta in support of TouchTunes' Opening Claim Construction Br. at 2 (attached as Exh. 10 to Reavill Decl.); Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2.

7. The parties agree that the computer jukeboxes of the asserted patents must play "songs" that are in the form of "studio quality musical recordings."

See, e.g., TouchTunes Opening Claim Construction Br. at 4-5; Exh. 10 to 10/05/09 Declaration of Joseph S. Presta in support of TouchTunes' Opening Claim Construction Br. at 2 (attached as Exh. 10 to Reavill Decl.); Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Br. at 2; '189 Reexam Resp. at 31-32; '575 Reexam Resp. at 30-32; '398 Reexam Resp. at 22-23; '834 Reexam Resp. at 17-18.

8. Arachnid's claim construction briefing advised the Court that all claims of the asserted patents are limited to the use of songs that are in the form of "studio quality musical recordings."

See, e.g., Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Br. at 2.

9. Defendant Arachnid's Opening Claim Construction Memorandum states:

> The parties agree that the proper construction for "song(s)"[] is a studio-quality musical recording.

Defendant Arachnid's Opening Claim Construction Mem. at 7 (footnote omitted) (emphasis in original).

10. Defendant Arachnid's Opening Claim Construction Memorandum states:

> Arachnid proposes the same construction for the term "computer jukebox" in all of the asserted claims, including Claims 1 and 7 of the '189 Patent, Claims 1 and 22 of the '575 Patent, Claims 1 and 8 of the '398 Patent, and Claims 1, 3, and 10 of the '834 Patent.

Defendant Arachnid's Opening Claim Construction Mem. at 6 n.3.

11. Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief states:

> The parties' proposed constructions of this claim term ["computer jukebox"] are very similar. The only difference between the parties' proposals is the phrase "with music and vocals" in Arachnid's proposal, which modifies the "songs" the jukebox is capable of playing. This phrase is included because the patents repeatedly state that the jukeboxes store and are capable of playing musical recordings. Arachnid included the "vocals" language because Touchtunes initially proposed that "computer jukebox" means simply a computer having an "audio production" capability. At that point in time, the parties had not yet agreed to the definition of "songs," which the parties now agree means "studio-quality musical recordings." *See* Exhibit 2,[] '189 Patent, at 2:3-5; 3:63-4:6; *see also* 17 U.S.C. § 116(e) (defining "jukebox" for copyright licensing purposes).

Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2 (footnote omitted).

12. Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief states:

> Because the parties now agree that "songs" are "musical recordings," Arachnid is willing to accept either its own proposed construction of "computer jukebox" or Touchtunes' proposed construction of the term, namely "A stand-alone unit operable solely by a patron, including a money intake unit, that plays and is capable of playing songs, as that term is used herein [*i.e.*, musical recordings].

Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2.

B. The Reexamination Proceedings

1. Generally

13. Each of the four asserted patents is the subject of reexamination proceedings before the PTO.

See, e.g., 12/18/08 Office Action in Reexamination Control No. 90/010,094 (regarding the '189 patent) (attached as Exh. 13); 12/18/08 Office Action in Reexamination Control No. 90/010,097 (regarding the '575 patent) (attached as Exh. 14); 12/18/08 Office Action in Reexamination Control No. 90/010,147 (regarding the '398 patent) (attached as Exh. 15 to Reavill Decl.); 12/18/08 Office Action in Reexamination Control No. 90/010,095 (regarding the '834 patent) (attached as Exh. 16).

14. During reexamination proceedings before the PTO, Arachnid was forced to acknowledge that each of the asserted patents is limited to jukeboxes that use studio quality musical recordings.

See, e.g., 12/18/08 Office Action in Reexamination Control No. 90/010,094 (regarding the '189 patent); 12/18/08 Office Action in Reexamination Control No. 90/010,097 (regarding the '575 patent); 12/18/08 Office Action in Reexamination Control No. 90/010,147 (regarding the '398 patent) (attached as Exh. 15 to Reavill Decl.); 12/18/08 Office Action in Reexamination Control No. 90/010,095 (regarding the '834 patent); '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 43-44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

15. In December 2008, the PTO rejected all claims of each asserted patent as unpatentable in view of certain prior art references.

See, e.g., 12/18/08 Office Action in Reexamination Control No. 90/010,094 (regarding the '189 patent); 12/18/08 Office Action in Reexamination Control No. 90/010,097 (regarding the '575 patent); 12/18/08 Office Action in Reexamination Control No. 90/010,147 (regarding the '398 patent); 12/18/08 Office Action in Reexamination Control No. 90/010,095 (regarding the '834 patent).

16. In an effort to save the validity of the asserted patents, during reexamination proceedings before the PTO, Arachnid distinguished each asserted patent from the prior art based on the precise nature of the songs downloaded, stored and played by the claimed jukeboxes.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37,

61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

17. In response to the PTO's claim rejections, and in each of the reexamination proceedings, Arachnid distinguished the asserted patents from the prior art by emphasizing the patents' requirement for "studio quality" musical recordings.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

18. In response to the PTO's claim rejections, and in each of the reexamination proceedings, Arachnid distinguished the prior art based on the prior art's purported lack of the transmission speed and storage capacity needed to transmit, store, access and play studio quality musical recordings.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 12-14, 19; '834 Reexam Appeal Br. at 7-10 & n.43, 11-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

19. Relying in part upon sworn declaration statements, Arachnid repeatedly argued (and continues to argue) to the PTO that the asserted patents are different from the prior art, because they require studio quality musical recordings, not just any songs.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

20. Arachnid has repeatedly told the PTO during the reexamination proceedings that all of the asserted patents are limited to the use of complete studio quality songs.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

21. Both in response to the PTO's December 2008 claim rejections and in Arachnid's appeal after the PTO issued its final rejections, Arachnid argued in each reexamination proceeding for each asserted patent that, unlike the prior art technology, the asserted patents require "complete songs of studio quality" and that the prior art technology could not accommodate the large amount of data contained in studio quality songs.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

22. In each reexamination proceeding before the PTO for each asserted patent, Arachnid identified the use of studio quality songs as a "critical" feature.

See, e.g., '189 Reexam Appeal Br. at 101-02; '575 Reexam Appeal Br. at 106-07; '398 Reexam Appeal Br. at 74; '834 Reexam Appeal Br. at 55-56; '834 Reexam Resp. at 14.

23. In each reexamination proceeding before the PTO for each asserted patent, Arachnid submitted sworn statements from its co-President (Patrick Rice) defining exactly what is required for a song to constitute a studio quality musical recording in the context of the asserted patents. *See* Rice Decl. at 1, ¶¶ 1, 10.

24. The sworn statements in the Rice Declaration describe "studio quality" music as "the extremely large amount of data contained on each CD [compact disc] even for one song." *See, e.g.*, Rice Decl. ¶¶ 6-8, 10.

25. The sworn statements in the Rice Declaration emphasize the claimed transmission, storage and playback of "the extremely large amount of data contained on each CD even for one song" as a point of distinguishing the asserted patents over the prior art. *See, e.g.*, Rice Decl. ¶¶ 6-8, 10, 11.

26. Arachnid used the Rice Declaration to expressly define "studio quality" songs as requiring a size-per-minute of at least 10 MB:

> In 1992, a complete song of studio quality would have required at least (even for a short song) about 30MB of computer storage space because a stereo CD audio converted to WAV files takes around 10MB per one minute of stereo sound. Since most songs are between three and five minutes, taking a 600MB CD, somewhere between 12 and 20 songs could be stored on a CDROM in the WAV format.

Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 17; '189 Reexam Appeal Br. at 23; '575 Reexam Resp. at 19-20; '575 Reexam Appeal Br. at 25-26; '398 Reexam Resp. at 14; '398 Reexam Appeal Br. at 12; '834 Reexam Resp. at 8-11; '834 Reexam Appeal Br. at 10.

27. In each of the reexamination proceedings for each of the asserted patents, Arachnid repeatedly relied upon the Rice Declaration as a reflection of "the understanding of a person of skill in the art of coin operated machinery with respect to the components and operation of karaoke machines and jukeboxes."

'189 Reexam Appeal Br. at 98; '575 Reexam Appeal Br. at 103-04; '398 Reexam Appeal Br. at 61; '834 Reexam Appeal Br. at 45-46; *see also* '189 Reexam Appeal Br. at 39, 98, 115; '575 Reexam Appeal Br. at 53, 63-64, 79-80, 103; '398 Reexam Appeal Br. at 37, 61; '834 Reexam Appeal Br. at 30-31, 45-46; Rice Decl. ¶ 2.

28. The statements Arachnid made in the Rice Declaration comport with the established understanding of "studio quality." That understanding remains the same today as it was in 1992: "studio quality" musical recordings (and, thus, the Arachnid patents) require a size-per-minute of at least 10 MB. *See, e.g.*, Ramone Decl. ¶ 11.

29. In each reexamination proceeding, Arachnid described the Rice Declaration as providing a discussion of the differences between the prior art and "the claimed invention of a computer jukebox."

See, e.g., '189 Reexam Appeal Br. at 98; '575 Reexam Appeal Br. at 103-04; '398 Reexam Appeal Br. at 61; '834 Reexam Appeal Br. at 45-46.

30. In connection with the '834 patent, Arachnid distinguished music used in prior art devices by arguing that:

> A person of ordinary skill in the art would have instead understood "songs stored" in the computer jukebox of claims 1 and 10 of the '834 Patent to be song waveforms (*i.e.*, audio signals) of complete songs of studio quality. Similarly, "song data" (from claim 3) that is stored in "a programmable memory" of "a central management station" and stored in "a song storage location" of "a data storage unit" of "a computer jukebox," would have been understood to mean the data that constitutes digitized audio signals of complete songs of studio quality.

'834 Reexam Resp. at 14 (emphasis in original; emphasis added).

31. In each reexamination proceeding for each asserted patent, Arachnid defined the "songs" of the asserted patents as complete songs of studio quality.

See, e.g., '189 Reexam Resp. at 21; '189 Reexam Appeal Br. at 27; '575 Reexam Resp. at 23; '575 Reexam Appeal Br. at 30, 116; '398 Reexam Resp. at 18; '398 Reexam Appeal Br. at 16; '834 Reexam Resp. at 14; '834 Reexam Appeal Br. at 13-14.

32. Prior art devices, according to Arachnid, "did not play studio-quality songs or music." Rice Decl. ¶ 6.

33. According to Arachnid, "[h]andling (storing, transmitting, managing, etc.) large computer file sizes was a particular hurdle to overcome in 1992," and the claimed requirement for downloading, storing and playing songs having such large amounts of data was not something that would have been contemplated in the prior art. Rice Decl. ¶ 11; *see id.* ¶¶ 6-8, 10.

34. In addressing all of the patents, Arachnid distinguished the prior art by arguing that:

> [I]t was not well understood in the coin-op industry that the following components (which correspond to various claim elements of the various patents under reexamination), for instance, could or should, be integrated into a single computerized mechanism:

> - a large capacity memory for storing, accessing and playing studio-quality audio;
>
> - at least one communication interface for receiving digitized song data [*i.e.*, the data that constitutes digitized audio signals of complete songs of studio quality] …
>
> Integrating these components together into a single computerized device in 1992 would not have been intuitive to the average person working in the coin-operated gaming industry because, for instance, the transfer of CDs to and from jukeboxes back then was purely physical. That is, CDs themselves generally could not be efficiently transferred via modem. Rather, a person had to physically, manually insert/remove CDs into/out of jukeboxes. Shifting to a new, disruptive paradigm where the contents on those CDs – the data – would be transferred via modem and telephone lines would not have been intuitive to a person of ordinary skill in the art. Additionally, this person with ordinary skill circa 1992 would have realized that based on the low bandwidth available then, and the extremely large amount of data contained on each CD even for one song, it would not have been something he or she was likely to attempt.

Rice Decl. ¶¶ 7, 8; *see also, e.g., id.* at ¶¶ 6, 10, 11; '575 Reexam Resp. at 23; '575 Reexam Appeal Br. at 30; '834 Reexam Resp. at 14; '834 Reexam Appeal Br. at 14.

35. The Rice Declaration makes clear that Arachnid disclaimed any jukebox that does not download, store and play studio quality musical recordings, such as a complete song from a CD. *See* Rice Decl. ¶¶ 6-8, 10, 11.

36. The arguments accompanying the Rice Declaration confirm Arachnid's intent to limit the asserted patents to the use of studio quality musical recordings.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

37. Arachnid distinguished the prior art based on the challenges presented by the large size of studio quality songs, particularly with respect to the ability to "download large song files to a jukebox, store the song files at the jukebox, and play the songs at the jukebox, as claimed."

'189 Reexam Reply Br. at 4; '575 Reexam Reply Br. at 4; *see also, e.g.*, '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39,

44, 52, 53, 60, 98, 101-02; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

38. According to Arachnid, the prior art approach to the challenges presented by the large size of studio quality songs was different than the approach of the asserted patents: Rather than using studio quality musical recordings, the prior art used low-quality music data "[i]n order to avoid large storage or bandwidth requirements."

'189 Reexam Resp. at 29, 39-41; '189 Reexam Appeal Br. at 37, 53; '575 Reexam Resp. at 30, 37, 41; '575 Reexam Appeal Br. at 40, 51, 56; *see also, e.g.*, '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

39. Arachnid specifically identified the receiving, storing, accessing and playing of studio-quality audio as "critical features" not found in the prior art.

See, e.g., '189 Reexam Appeal Br. at 101-02; '575 Reexam Appeal Br. at 106-07; '398 Reexam Appeal Br. at 74; '834 Reexam Appeal Br. at 55-56; '834 Reexam Resp. at 14.

40. Arachnid repeatedly argued that its patents were different from the prior art, because they require that complete studio quality musical recordings be downloaded to, stored at and played by the jukeboxes.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

41. Arachnid confirmed that "a complete song of studio quality … takes around 10 MB per one minute of stereo sound." Rice Decl. ¶ 10.

42. Arachnid made clear that the claimed songs must have a size-per-minute of at least 10 MB.

Rice Decl. ¶¶ 6-8, 10, 11; *see also, e.g.*, '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

43. Arachnid made unambiguous arguments regarding the requirement for studio quality songs to the PTO in order to distinguish the asserted patents from the prior art.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

44. Arachnid disclaimed any patent scope that does not require "studio quality musical recordings."

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

45. Arachnid expressly excluded from the scope of the asserted patent claims any jukebox that does not receive, store and play songs having a size-per-minute of at least 10 MB.

See, e.g., '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575

Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

2. The Reexamination Proceedings Regarding the '189 Patent

46. In a section under the heading, "Background Of The '189 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> The inventions claimed in the '189 Patent are generally directed to computer jukebox systems. The patent includes two independent claims. Claim 1 is directed to the computer jukebox itself. Claim 7 is directed to a computer jukebox network that includes a management station and a plurality of computer jukeboxes.
>
> Each claim in the '189 Patent is entitled to a priority date no later than March 6, 1992. *See* Order Granting Request For Ex Parte Reexamination, April 11, 2008, at 3. Accordingly, both the claims of the '189 Patent and the teachings of the prior art must be viewed through the eyes of a person having ordinary skill in the art in early 1992. *See* 35 U.S.C. § 103(a) ("A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.") (emphasis added); *see also* MPEP § 2111.01(III) ("[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.") (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)); MPEP § 2141.01(III) (entitled "Content of the Prior Art is Determined at the Time the Invention was Made to Avoid Hindsight").
>
> While it can be easy to forget, the state of computer/electronics technology—and of jukeboxes and other coin-operated machines—was vastly different in early 1992 than it is today. In the nearly two decades that have since passed, enormous strides have been made in areas such as computer memory, and computer and digital communications. In 1992, low-cost networks had a much smaller bandwidth than today's networks. For example, it is believed that the most advanced, reasonably available modem in 1992 had a transmission rate of approximately 14.4kbs and 28.8kbs, but now modem speed is measured in megabits per second, which is hundreds of times faster. Exhibit 1 (Declaration of Rice), at ¶ 4. And in 1992, low-cost digital memory had a much lower storage capacity. For example, commonly available and affordable storage capacities were less than 200MB. Exhibit 1 (Declaration of Rice), at ¶ 5.
>
> Moreover, it was not well understood that all of the following components could, or should, be integrated into a single computerized mechanism in 1992:

- a large capacity memory for storing, accessing and playing studio-quality audio;
- at least one communication interface for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count;
- a display adapted for presenting song selections based on the song identity data and a user attract mode;
- a song selector for determining from the song selections a selected digitized song to be played on the computer jukebox;
- a processor operative to present on the display graphical data during a user attract mode and also displaying song selections based on song identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory; and
- a digital to analog converter to convert the digitized song data to an analog signal for the audio speaker.

Processor speeds, storage requirements and limitations, telecommunication access and transmission rates, and technology reliability, among other things, were factors that were not nearly as understood as they are today. Integrating all of these technical features was cutting-edge in 1992. *See* Exhibit 1 (Declaration of Rice), at ¶¶ 7-9.

'189 Reexam Resp. at 13-15.

47. In a section under the heading, "BACKGROUND OF THE '189 PATENT AND CLAIM CONSTRUCTION," The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

Before addressing the specifics of the rejections raised on pages 6-29 of the December 18, 2008 Office Action and pages 4-44 of the June 16, 2009 Office Action, the Patent Owner shall discuss the background of the technology at issue in the '189 patent and the meaning of certain terms recited in the claims of the '189 patent.

A. Background Of The '189 Patent

The inventions claimed in the '189 Patent are generally directed to computer jukebox systems. The patent includes four independent claims. Claims 1 and 13 are directed to the computer jukebox itself. Claims 7 and 16 are directed to a computer jukebox network that includes a management station and a plurality of computer jukeboxes.

Each claim in the '189 Patent is entitled to a priority date no later than March 6, 1992. *See* April 11, 2008 Order Granting Request For Ex Parte Reexamination of '189 patent, at 3. Accordingly, both the claims of the '189 Patent and the teachings of the prior art

must be viewed through the eyes of a person having ordinary skill in the art in early 1992. *See* 35 U.S.C. § 103(a) ("A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.") (emphasis added); *see also* MPEP § 2111.01(III) ("[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.") (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)); MPEP § 2141.01(III) (entitled "Content of the Prior Art is Determined at the Time the Invention was Made to Avoid Hindsight").

While it can be easy to forget, the state of computer/electronics technology — and of jukeboxes and other coin-operated machines — was vastly different in early 1992 than it is today. In the nearly two decades that have since passed, enormous strides have been made in areas such as computer memory, and computer and digital communications. In 1992, low-cost networks had a much smaller bandwidth than today's networks. For example, it is believed that the most advanced, reasonably available modem in 1992 had a transmission rate of approximately 14.4kbs and 28.8kbs, but now modem speed is measured in megabits per second, which is hundreds of times faster. *See* Exhibit O, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 4. And in 1992, low-cost digital memory had a much lower storage capacity. For example, commonly available and affordable storage capacities were less than 200MB. *See* Exhibit O, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 5.

Moreover, Patent Owner asserts that it was not well understood in 1992 that all of the following components could, or should, be integrated into a single computerized mechanism:

- a large capacity memory for storing, accessing and playing studio-quality audio;
- at least one communication interface for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count;
- a display adapted for presenting song selections based on the song identity data and a user attract mode;
- a song selector for determining from the song selections a selected digitized song to be played on the computer jukebox;
- a processor operative to present on the display graphical data during a user attract mode and also displaying song selections based on song identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory; and

- a digital to analog converter to convert the digitized song data to an analog signal for the audio speaker.

Processor speeds, storage requirements and limitations, telecommunication access and transmission rates, and technology reliability, among other things, were factors that were not nearly as understood as they are today. Integrating all of these technical features was cutting-edge in 1992. *See* Exhibit O, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶¶ 7-9.

'189 Reexam Appeal Br. at 18-20 (emphasis in original).

48. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

The Office Action improperly omits many critical features from the list Patent Owner provided on pages 14-15 of its March 18, 2009 response which a person of skill in the art in 1992 would not have thought to integrate into a single computerized mechanism. The full list includes the following (with the features the Examiner omitted underlined):

- a large capacity memory <u>for storing, accessing and playing studio-quality audio;</u>
- at least one communication interface <u>for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count;</u>
- a display <u>adapted for presenting song selections based on the song identity data and a user attract mode;</u>

  a song selector <u>for determining from the song selections a selected digitized song to be played on the computer jukebox;</u>
- a processor <u>operative to present on the display graphical data during a user attract mode and also displaying song selections based on song identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory;</u> and
- a digital to analog converter <u>to convert the digitized song data to an analog signal for the audio speaker.</u>

There is no indication that a person of skill in the art in 1992 would have integrated all of these components capable of performing all of these functions and having these features into a single computerized mechanism. Furthermore, the Audiocomp and Sound Leisure documents which the Office Action asserts as showing these features do not anywhere disclose at least a communication interface that receives a song record or

> displaying a user attract mode. *See* Exhibits I, J, K, Audiocomp and Sound Leisure documents.

'189 Reexam Appeal Br. at 101-02 (emphasis in original).

49. The March 8, 2010 Reply Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Patent Owner does not contend that a desktop computer in 1992 did not include a monitor, keyboard, modem, hard drive, and processor. Rather, Patent Owner's point about computer technology in 1992 is that large strides have been made since 1992 in computer memory, processing speeds, and digital communications. This understanding is relevant to Patent Owner's argument that a person of skill in the art in 1992 would not have thought to use computer technology with a jukebox in order to, *inter alia*, download large song files to a jukebox, store the song files at the jukebox, and play the songs at the jukebox, as claimed in the '189 patent, in view of the limitations in 1992 related to using computer technology to send, store, and process large files.

'189 Reexam Reply Br. at 4.

50. In a section under the heading, "Background Of The '189 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Finally, storage capacity requirements for karaoke devices would have been very modest as compared to the typical jukebox, because karaoke machines only needed to play lower quality, instrumental backing music.[] For example, Tsumura specifically allocates only 54 to 85 kilobytes to the instrumental music data, which would never accommodate complete songs. *See* Exhibit 1 (Declaration of Rice), at ¶ 10.

'189 Reexam Resp. at 17 (footnote omitted); *see id.* at 13-17.

51. In a section under the heading, "Background Of The '189 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'189 Reexam Resp. at 17 n.5 (emphasis in original); *see id.* at 13-17.

52. In a section under the heading, "BACKGROUND OF THE '189 PATENT AND CLAIM CONSTRUCTION," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Finally, storage capacity requirements for karaoke devices were very modest as compared to the typical jukebox, because karaoke machines only needed to play lower quality, instrumental backing music.[] For example, Tsumura specifically allocates only 54 to 85 kilobytes to the instrumental control data, which would never accommodate actual songs. *See* Exhibit O, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 10.

'189 Reexam Appeal Br. at 23 (footnote omitted); *see id.* at 18-23.

53. In a section under the heading, "BACKGROUND OF THE '189 PATENT AND CLAIM CONSTRUCTION," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'189 Reexam Appeal Br. at 23 n.89 (emphasis in original); *see id.* at 18-23.

54. In a section under the heading, "Background Of The '189 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> A person of ordinary skill in the art in 1992 would have understood the ordinary and customary meaning of a "digital song" to be a digitized version of an audio signal. Thus, the term should not include any MIDI-like music data. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. http://en.wikipedia.org/wiki/Musical Instrument Digital Interface. A person of ordinary skill in the art would have instead understood a "digital song" of a jukebox to be a song waveform *(i.e.* an audio signal) of a complete song of studio quality that has been digitized *(i.e.* converted into a digital audio signal). Accordingly, "digital song data" would have been understood to mean the data that constitutes the digitized audio signal of a complete song.

'189 Reexam Resp. at 21 (emphasis in original); *see id.* at 13-21.

55. In a section under the heading, "BACKGROUND OF THE '189 PATENT AND CLAIM CONSTRUCTION," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> A person of ordinary skill in the art in 1992 would have understood the ordinary and customary meaning of a "digital song" to be a digitized version of an audio signal of a recorded song. Thus, the term should not include any MIDI-like music data. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. http://en.wikipedia.org/wiki/Musical Instrument Digital Interface. A person of ordinary skill in the art would have instead understood a "digital song" of a jukebox to be a song waveform *(i.e.* an audio signal) of a recorded song of studio quality that has been digitized *(i.e.* converted into a digital audio signal) *See, e.g.*, Exhibit A, '189 patent, at 1:22; 1:37; 1:43-44; 2:3-5; 2:6-16; and 7:51-56. Accordingly, "digital song data" would have been understood to mean the data that constitutes the digitized audio signal of a complete recorded song.

'189 Reexam Appeal Br. at 27 (emphasis in original); *see id.* at 18-27.

56. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.*, at 2:50-60, the instrumental music data is provided in a MIDI-like format, as discussed above. *See id.*, at 5:66-8:62.

'189 Reexam Resp. at 29.

57. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Exhibit B, Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.*, at 2:50-60, the instrumental music data is provided in a MIDI-like format, as discussed above. *See id.*, at 5:66-8:62.

'189 Reexam Appeal Br. at 37.

58. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the ‘189 patent) states:

> Tsumura fails to teach any of the above limitations, because it only teaches a system that downloads MIDI-like instrumental music data, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See, e.g., id.*, at 5:66-8:62. Thus, no "digital song data," as recited in the '189 Patent, is ever transmitted by the host computer of Tsumura, received by the karaoke machine of Tsumura, or stored in a memory of either the host computer or the karaoke machine. Only MIDI-like data is stored, transmitted and received. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1992 would have understood MIDI-like data as being entirely distinct from "digital song data."

‘189 Reexam Resp. at 33-34 (emphasis in original).

59. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the ‘189 patent) states:

> Tsumura fails to teach any of the above limitations, because it fails to teach a system for downloading or storing songs, as that term is properly construed. Instead, Tsumura teaches only a system that downloads MIDI-like instrumental music data, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See, e.g.*, Exhibit B, Tsumura, at 5:66-8:62. Thus, no "digital song data," as recited in the '189 Patent, is ever transmitted by the host computer of Tsumura, received by the karaoke machine of Tsumura, or stored in a memory of either the host computer or the karaoke machine. Only MIDI-like data is stored, transmitted and received. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1992 would have understood MIDI-like data as being entirely distinct from "digital song data."

‘189 Reexam Appeal Br. at 44 (emphasis in original).

60. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the ‘189 patent) states:

> Tsumura teaches a karaoke machine system that downloads low-quality, instrumental music data. Conversely, Vogel teaches a conventional, mechanical jukebox in which no music data is downloaded. Instead, analog recordings are stored only locally, on conventional physical media such as records. A person of ordinary skill in the art circa 1992 would not look to the completely different device of Vogel for ways to improve a karaoke machine that downloads binary, instrumental music data. Thus, the Office Action's (conclusory) rationale for combining Tsumura with Vogel as "base device"

> and "known technique" does not support a finding of obviousness with respect to claim 1.[] By trying to force such a combination despite the impediments that would have been encountered by a person of ordinary skill in the art in early 1992, the Examiner improperly makes use of knowledge gained from the '189 Patent specification itself—knowledge that a person of ordinary skill in the art would of course not have possessed prior to the '189 Patent's filing date. *See* MPEP § 2142 (in determining whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art, "[k]nowledge of applicant's disclosure must be put aside").[]

'189 Reexam Resp. at 39-40 (footnotes omitted) (emphasis in original).

61. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Tsumura teaches a karaoke machine system that downloads low-quality, instrumental music data. Conversely, Vogel teaches a conventional, mechanical jukebox in which no music data is downloaded. Instead, analog recordings are stored only locally, on conventional physical media such as records. A person of ordinary skill in the art circa 1992 would not look to the completely different device of Vogel for ways to improve a karaoke machine that downloads binary, instrumental music data. Thus, the Office Actions' (conclusory) rationale for combining Tsumura with Vogel as "base device" and "known technique" does not support a finding of obviousness with respect to Claim 1.[] By trying to force such a combination despite the impediments that would have been encountered by a person of ordinary skill in the art in early 1992, the Examiner improperly makes use of knowledge gained from the '189 Patent specification itself — knowledge that a person of ordinary skill in the art would of course not have possessed prior to the '189 Patent's filing date. *See* MPEP § 2142 (in determining whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art, "[k]nowledge of applicant's disclosure must be put aside").[]

'189 Reexam Appeal Br. at 52 (footnotes omitted) (emphasis in original).

62. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.,* at 2:50-60, the instrumental music data is provided in a MIDI-like format, *see id.,* at 5:66-8:62, as was commonly done in karaoke systems.[]

'189 Reexam Resp. at 40-41 (footnote omitted).

63. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Exhibit B, Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.*, at 2:50-60, the instrumental music data is provided in a MIDI-like format, *see id.*, at 5:66-8:62, as was commonly done in karaoke systems.[]

'189 Reexam Appeal Br. at 53 (footnote omitted).

64. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Tsumura teaches a karaoke machine system that downloads low-quality, instrumental music data which is used by a synthesizer to re-produce instrumental background music.

'189 Reexam Appeal Br. at 60 (emphasis in original).

65. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> The Examiner argues that she is not required to make a statement with respect to the level of ordinary skill in the art and that she only needs to review the prior art in order to determine the level of ordinary skill in the art and take into account knowledge which was within the level or ordinary skill in the art to make findings to establish a *prima facie* case of obviousness. *See* Exhibit H, June 16, 2009 Office Action, at 51-52. The Examiner, however, clearly did not take into account the knowledge of a person of skill in the art. The Examiner completely ignored the Declaration of Pat Rice, a person of skill in the art, and his testimony about how a person of skill in the art would have understood a jukebox to be different from a karaoke machine. *Id.* Moreover, the Examiner apparently did not appreciate, from her review of the prior art, that a person of skill in the art would not have considered a karaoke machine, like that disclosed in Tsumura, to be a jukebox because karaoke machines were configured to receive and store small MIDI control data files, not large actual digitized song data files. Such oversights by the Examiner show that she did not truly determine the level of ordinary skill in the art and therefore was not able to properly analyze the claims and the prior art through the eyes of a person of ordinary skill in the art in 1992.

'189 Reexam Appeal Br. at 39.

66. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> The Patent Owner respectfully disagrees with this characterization of the Rice Declaration. The Rice Declaration discusses numerous topics that have a nexus to the claimed invention. The Rice Declaration discusses limitations of the claimed invention and highlights claimed elements that would not have been integrated into a single computerized mechanism in 1992. The Rice Declaration presents evidence regarding the state of the art of many technical areas related to the claimed inventions in 1992 such as transmission speeds, computer memory storage capacity, and graphics. The Rice Declaration also discusses the differences between karaoke machines and jukeboxes in 1992, such as the fact that karaoke machines were not coin operated, were only used by a dedicated operator using a personal console, utilized different hardware, etc. Such differences are clearly relevant as they point to the state of the art of the terms being contested and show why a person of skill in the art at the time would not have considered jukeboxes and karaoke machines to be comparable devices. The Rice Declaration also discusses how a person or ordinary skill in the art would not have combined features to arrive at the claimed inventions of the '189 patent, and thus provides a further nexus to the claimed invention.
>
> Furthermore, the Rice Declaration is not just an "opinion" but is in fact the understanding of a person of skill in the art of coin operated machinery with respect to the components and operation of karaoke machines and jukeboxes. Therefore, his Declaration regarding what a person of skill understood the terms "karaoke machine" and "jukebox" to encompass in 1992 is important and should be considered because, though the "state of the art" in 1992 is not being contested, the meaning of the terms of the art in 1992 is being contested. The Rice Declaration is evidence, based on Mr. Rice's years of experience in the industry, that the Examiner's understanding of the terms like "jukebox," "karaoke machine," and "graphics" is incorrect. Accordingly, the Rice Declaration is effective, and the Examiner should be required to address the merits of Mr. Rice's statements regarding what a person of skill in the art in 1992 would have understood about jukeboxes, karaoke machines, song data, and graphics.

'189 Reexam Appeal Br. at 98.

67. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states: "Mr. Rice is a person of skill in the art, which the Examiner never disputes." '189 Reexam Appeal Br. at 115.

68. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,094 (regarding the '189 patent) states:

> Both independent claims of the '189 Patent recite a "computer jukebox." Specifically, independent claim 1 is entirely directed to a computer jukebox, and requires that (i) the display be adapted for showing to a "prospective user of the computer jukebox" user attract data and information that identifies the songs for which digital song data is stored in the data storage unit and that is based on song identity data; (ii) the selection

> keys be responsive to a selection of a song "to be played on the computer jukebox"; (iii) the memory include instructions for causing the processor to decompress the accessed compressed digital song data and send the decompressed digital song data to the digital to analog converter so that the song selected "is played on the computer jukebox"; and (iv) the memory include instructions for causing the processor to respond to compressed digital song data and to song identity data...to control the storage of the received compressed digital song data and the received song identity data in the data storage unit to create an updated library of songs "stored in the computer jukebox." Independent claim 7 requires "a plurality of computer jukeboxes," with each computer jukebox comprising limitations very similar to those in claim 1. Claim 7 further requires that a management station comprise a management station memory including instructions for causing the management station processor to compress and transmit a subset of the digital song data and transmit corresponding song identity data "to at least one selected computer jukebox to update the library of songs in the computer jukebox."

'189 Reexam Resp. at 31-32.

3. The Reexamination Proceedings Regarding the '575 Patent

69. In a section under the heading, "Background Of The '575 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The inventions claimed in the '575 Patent are generally directed to computer jukebox systems. The patent includes four independent claims Claim 1 is directed to the computer jukebox itself. Claim 9 is directed to a central management system that distributes digitized songs to a computer jukebox. Claim 15 is directed to a computer jukebox network that includes a central management system and a plurality of computer jukeboxes. Finally, claim 22 is directed to a method for receiving and playing songs using a computer jukebox.
>
> Each claim in the '575 Patent is entitled to a priority date no later than March 6, 1992. *See* Order Granting Request For Ex Parte Reexamination, April 11, 2008, at 3-4. Accordingly, both the claims of the '575 Patent and the teachings of the prior art must be viewed through the eyes of a person having ordinary skill in the art in early 1992. *See* 35 U.S.C. § 103(a) ("A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.") (emphasis added); *see also* MPEP § 2111.01(III) ("[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application." (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)); MPEP § 2141.01(III) (entitled "Content of the Prior Art is Determined at the Time the Invention was Made to Avoid Hindsight.").

> While it can be easy to forget, the state of computer/electronics technology—and of jukeboxes and other coin-operated machines—was vastly different in early 1992 than it is today. In the nearly two decades that have since passed, enormous strides have been made in areas such as computer memory, and computer and digital communications. In 1992, low-cost networks had a much smaller bandwidth than today's networks. For example, it is believed that the most advanced, reasonably available modem in 1992 had a transmission rate of approximately 14.4kbs and 28.8kbs, but now modem speed is measured in megabits per second, which is hundreds of times faster. Exhibit 1 (Declaration of Rice), at ¶ 4. And in 1992, low-cost digital memory had a much lower storage capacity. For example, commonly available and affordable storage capacities were less than 200MB. Exhibit 1 (Declaration of Rice), at ¶ 5.
>
> Moreover, it was not well understood that all of the following components could, or should, be integrated into a single computerized mechanism in 1992:
>
> - a large capacity memory for storing, accessing and playing studio-quality audio;
> - at least one communication interface for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count;
> - a display adapted for presenting song selections based on the song identity data and a user attract mode;
> - a song selector for determining from the song selections a selected digitized song to be played on the computer jukebox;
> - a processor operative to present on the display graphical data during a user attract mode and also displaying song selections based on song identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory; and
> - a digital to analog converter to convert the digitized song data to an analog signal for the audio speaker.
>
> Processor speeds, storage requirements and limitations, telecommunication access and transmission rates, and technology reliability, among other things, were factors that were not nearly as understood as they are today. Integrating all of these technical features was cutting-edge in 1992. *See* Exhibit 1 (Declaration of Rice), at ¶¶ 7-9.

‘575 Reexam Resp. at 15-17.

70. In a section under the heading, “BACKGROUND OF THE ‘575 PATENT AND CLAIM CONSTRUCTION,” the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

Before addressing the specific rejections of the Office Actions, Patent Owner shall discuss the background of the technology at issue in the '575 patent and the meaning of certain terms recited in the claims of the '575 patent.

A. Background Of The '575 Patent

The inventions claimed in the '575 Patent are generally directed to computer jukebox systems. The patent includes seven independent claims. Claims 1 and 35 are directed to the computer jukebox itself. Claims 9 and 43 are directed to a central management system that distributes digitized songs to a computer jukebox. Claims 15 and 50 are directed to a computer jukebox network that includes a central management system and a plurality of computer jukeboxes. Finally, Claim 22 is directed to a method for receiving and playing songs using a computer jukebox.

Each claim in the '575 Patent is entitled to a priority date no later than March 6, 1992. *See* Order Granting Request For Ex Parte Reexamination, April 11, 2008, at 3-4. Accordingly, both the claims of the '575 Patent and the teachings of the prior art must be viewed through the eyes of a person having ordinary skill in the art in early 1992. *See* 35 U.S.C. § 103(a) ("A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.") (emphasis added); *see also* MPEP § 2111.01(III) ("[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application." (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)); MPEP § 2141.01(III) (entitled "Content of the Prior Art is Determined at the Time the Invention was Made to Avoid Hindsight.").

While it can be easy to forget, the state of computer/electronics technology — and of jukeboxes and other coin-operated machines — was vastly different in early 1992 than it is today. In the nearly two decades that have since passed, enormous strides have been made in areas such as computer memory, and computer and digital communications. In 1992, low-cost networks had a much smaller bandwidth than today's networks. For example, it is believed that the most advanced, reasonably available modem in 1992 had a transmission rate of approximately 14.4kbs and 28.8kbs, but now modem speed is measured in megabits per second, which is hundreds of times faster. *See* Exhibit N, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 4. And in 1992, low- cost digital memory had a much lower storage capacity. For example, commonly available and affordable storage capacities were less than 200MB. *See id.* at ¶ 5.

Moreover, Patent Owner asserts that it was not well understood in 1992 that all of the following components could, or should, be integrated into a single computerized mechanism:

- a large capacity memory for storing, accessing and playing studio-quality audio;

- at least one communication interface for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count;
- a display adapted for presenting song selections based on the song identity data and a user attract mode;
- a song selector for determining from the song selections a selected digitized song to be played on the computer jukebox;
- a processor operative to present on the display graphical data during a user attract mode and also displaying song selections based on song identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory; and
- a digital to analog converter to convert the digitized song data to an analog signal for the audio speaker.

Processor speeds, storage requirements and limitations, telecommunication access and transmission rates, and technology reliability, among other things, were factors that were not nearly as understood as they are today. Integrating all of these technical features was cutting-edge in 1992. *See id.*, at ¶¶ 7-9.

'575 Reexam Appeal Br. at 21-23 (emphasis in original).

71. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

The Office Action improperly omits many critical features from the list Patent Owner provided on pages 17 of its March 18, 2009 response which a person of skill in the art in 1992 would not have thought to integrate into a single computerized mechanism. The full list includes the following (with the features the Examiner omitted underlined):

- a large capacity memory <u>for storing, accessing and playing studio-quality audio;</u>
- at least one communication interface <u>for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count;</u>
- a display <u>adapted for presenting song selections based on the song identity data and a user attract mode;</u>
- a song selector <u>for determining from the song selections a selected digitized song to be played on the computer jukebox;</u>

- a processor operative to present on the display graphical data during a user attract mode and also displaying song selections based on song identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory; and

- a digital to analog converter to convert the digitized song data to an analog signal for the audio speaker.

> There is no indication that a person of skill in the art in 1992 would have integrated all of these components capable of performing all of these functions and having these features into a single computerized mechanism. Furthermore, the Audiocomp and Sound Leisure documents which the Office Action asserts as showing these features do not anywhere disclose at least a communication interface that receives a song record or displaying a user attract mode. *See* Exhibits H, I, J, Audiocomp and Sound Leisure documents.

'575 Reexam Appeal Br. at 106-07 (emphasis in original).

72. The February 17, 2010 Reply Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Patent Owner does not contend that a desktop computer in 1992 did not include a monitor, keyboard, modem, hard drive, and processor. Rather, Patent Owner's point about computer technology in 1992 is that large strides have been made since 1992 in computer memory, processing speeds, and digital communications. This understanding is relevant to Patent Owner's argument that a person of skill in the art in 1992 would not have thought to use computer technology with a jukebox in order to, *inter alia*, download large song files to a jukebox, store the song files at the jukebox, and play the songs at the jukebox, as claimed in the '575 patent, in view of the limitations in 1992 related to using computer technology to send, store, and process large files.

'575 Reexam Reply Br. at 4.

73. In a section under the heading, "Background Of The '575 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Finally, storage capacity requirements for karaoke devices would have been very modest as compared to the typical jukebox, because karaoke machines only needed to play lower quality, instrumental backing music.[] For example, Tsumura specifically allocates only 54 to 85 kilobytes to the instrumental music data, which would never accommodate complete songs. *See* Exhibit 1 (Declaration of Rice), at ¶ 10.

'575 Reexam Resp. at 19-20 (footnote omitted); *see id.* at 15-20.

74. In a section under the heading, "Background Of The '575 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'575 Reexam Resp. at 20 n.5 (emphasis in original); *see id.* at 15-20.

75. In a section under the heading, "BACKGROUND OF THE '575 PATENT AND CLAIM CONSTRUCTION," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Finally, storage capacity requirements for karaoke devices were very modest as compared to the typical jukebox, because karaoke machines only needed to play lower quality, instrumental backing music.[] For example, Tsumura specifically allocates only 54 to 85 kilobytes to the instrumental control data, which would never accommodate actual songs. *See* Exhibit N, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 10.

'575 Reexam Appeal Br. at 25-26 (footnote omitted); *see id.* at 21-26.

76. In a section under the heading, "BACKGROUND OF THE '575 PATENT AND CLAIM CONSTRUCTION," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'575 Reexam Appeal Br. at 26 n.129 (emphasis in original); *see id.* at 21-26.

77. In a section under the heading, "Background Of The '575 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> A person of ordinary skill in the art in 1992 would have understood the ordinary and customary meaning of a "digitized song" to be a digitized version of an audio signal. Thus, the term should not include any MIDI-like music data. As discussed *supra,* MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. A person of ordinary skill in the art would have

> instead understood a "digitized song" of a jukebox to be a song waveform *(i.e.* an audio signal) of a complete song of studio quality that has been digitized *(i.e.* converted into a digital audio signal).

'575 Reexam Resp. at 23 (emphasis in original); *see id.* at 15-23.

78. In a section under the heading, "BACKGROUND OF THE '575 PATENT AND CLAIM CONSTRUCTION," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> A person of ordinary skill in the art in 1992 would have understood the ordinary and customary meaning of a "digitized song" to be a digitized version of an audio signal of a recorded song. Thus, the term should not include any MIDI-like music data. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. A person of ordinary skill in the art would have instead understood a "digitized song" of a jukebox to be a song waveform *(i.e.* an audio signal) of a recorded song of studio quality that has been digitized *(i.e.* converted into a digital audio signal). *See* Exhibit A, '575 patent, at 1:21-22; 1:36-38; 1:42-46; 2:3-5; 2:6-16; and 7:51-56. Accordingly, "digitized song data" would have been understood to mean the data that constitutes the digitized audio signal of a complete recorded song.

'575 Reexam Appeal Br. at 30 (emphasis in original); *see id.* at 21-30.

79. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Patent Owner actually argues that a "digitized song" is a song waveform, *i.e.*, an audio signal of a complete song of studio quality that has been digitized. *See* Exhibit N, March 18, 2009 Response, at 23.

'575 Reexam Appeal Br. at 116 (emphasis in original).

80. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Tsumura fails to teach any of the above limitations, because it only teaches a system that downloads MIDI-like instrumental music data, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See, e.g., Tsumura*, at 5:66-8:62. Thus, no "digitized song," as recited in the '575 Patent, is ever transmitted by the host computer of Tsumura, received by the karaoke machine of Tsumura, or stored in a memory of either the host computer or the karaoke machine. Only MIDI-like data is stored, transmitted and received. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1992 would

> have understood MIDI-like data as being entirely distinct from a "digitized song." Accordingly, Tsumura cannot anticipate any of independent claims 1, 9, 15 and 22 for this additional reason.

‘575 Reexam Resp. at 32.

81. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> Tsumura fails to teach any of the above limitations, because it fails to teach a system for downloading or storing songs, as that term is properly construed. Instead, Tsumura teaches only a system that downloads MIDI-like instrumental music data, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See* Exhibit B, Tsumura, at 5:66-8:62. Thus, no "digitized song," as recited in the '575 Patent, is ever transmitted by the host computer of Tsumura, received by the karaoke machine of Tsumura, or stored in a memory of either the host computer or the karaoke machine. Only MIDI-like data is stored, transmitted and received. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1992 would have understood MIDI-like data as being entirely distinct from a "digitized song." Accordingly, Tsumura cannot anticipate any of independent Claims 1, 9, 15, 22, 35, 43, and 50 for this additional reason.

‘575 Reexam Appeal Br. at 43-44.

82. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.,* at 2:50-60, the instrumental music data is provided in a MIDI-like format, as discussed above. *See id.,* at 5:66-8:62.

‘575 Reexam Resp. at 30.

83. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.,* at 2:50-60, the

> instrumental music data is provided in a MIDI-like format, *see id.*, at 5:66-8:62, as was commonly done in karaoke systems.[]

'575 Reexam Resp. at 37 (footnote omitted).

84. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.*, at 2:50-60, the instrumental music data is provided in a MIDI-like format, as discussed above. *See id.*, at 5:66-8:62.

'575 Reexam Resp. at 41.

85. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Exhibit B, Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.*, at 2:50-60, the instrumental music data is provided in a MIDI-like format, as discussed above. *See id.*, at 5:66-8:62.

'575 Reexam Appeal Br. at 40.

86. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Exhibit B, Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.*, at 2:50-60, the instrumental music data is provided in a MIDI-like format, *see id.*, at 5:66-8:62, as was commonly done in karaoke systems.[]

'575 Reexam Appeal Br. at 51 (footnote omitted).

87. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Tsumura discloses a host computer which downloads binary-coded music data to a karaoke machine, where the music data includes a "file header," "words data" and "instrumental music data." *See* Exhibit B, Tsumura, at 3:51-56, 5:49-51 and Figure 1. In order to avoid large storage or bandwidth requirements, *see, e.g., id.,* at 2:50-60, the instrumental music data is provided in a MIDI-like format, as discussed above. *See id.,* at 5:66-8:62.

'575 Reexam Appeal Br. at 56.

88. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The teachings of Korn, however, are not "applicable to the base device" of Tsumura. Tsumura teaches a karaoke machine system that downloads low-quality, instrumental music data which is used by a synthesizer to re-produce instrumental background music.

'575 Reexam Resp. at 40 (emphasis in original).

89. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Thus, the Office Action's (conclusory) rationale for combining Tsumura and Korn as "base device" and "known technique" does not support a finding of obviousness with respect to claims 3 and 24.[]

'575 Reexam Resp. at 40 (footnote omitted).

90. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The teachings of Vogel, however, are not "applicable to the Tsumura/Korn base device."[] Tsumura (which the Examiner finds to be part of the "base device" of the Tsumura/Korn combination) teaches a karaoke machine system that downloads low-quality, instrumental music data and not digital, or other, songs.

'575 Reexam Resp. at 44 (footnote omitted) (emphasis in original).

91. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Thus, the Office Action's (conclusory) rationale for combining Tsumura/Korn with Vogel as "base device" and "known technique" does not support a finding of obviousness with respect to claims 6.

'575 Reexam Resp. at 44.

92. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The teachings of Korn, however, are not "applicable to the base device" of Tsumura. Tsumura teaches a karaoke machine system that downloads low-quality, instrumental music data which is used by a synthesizer to re-produce instrumental background music.

'575 Reexam Appeal Br. at 55 (emphasis in original).

93. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Thus, the Office Actions' (conclusory) rationale for combining Tsumura and Korn as "base device" and "known technique" does not support a finding of obviousness with respect to Claims 3 and 24.[]

'575 Reexam Appeal Br. at 56 (footnote omitted).

94. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The teachings of Vogel, however, are not "applicable to the Tsumura/Korn base device."[ ] Tsumura (which the Examiner finds to be part of the "base device" of the Tsumura/Korn combination) teaches a karaoke machine system that downloads low-quality, instrumental music data and not digital, or other, songs.

'575 Reexam Appeal Br. at 60 (footnote omitted) (emphasis in original).

95. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> Thus, the Office Actions' (conclusory) rationale for combining Tsumura/Korn with Vogel as "base device" and "known technique" does not support a finding of obviousness with respect to Claim 6.

‘575 Reexam Appeal Br. at 60.

96. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> The Examiner's statement is not a correct characterization of Patent Owner's argument. Patent Owner argued that, contrary to the Examiner's assertions on page 15 of the December 18, 2008 Office Action, Korn does not teach a "known technique" that is applicable to the device taught in Tsumura. Tsumura teaches a karaoke machine that downloads low-quality, instrumental control data which is used by a synthesizer to re-produce instrumental background music. Korn teaches an information retrieval system in which no music data is downloaded. Korn discloses audio or video recordings being mechanically played at a central location with the player output being selectively connected to a local audio/video viewing station. Patent Owner argued, correctly, that a person of skill in the art in 1992 would not have looked to the completely different audio/video distribution system of Korn for ways to improve a karaoke machine that downloads binary instrumental control data to create background music on a synthesizer. For these same reasons, Tsumura and Korn were not in the field of applicant's endeavor, *i.e.*, downloading, storing, and playing digital songs and user attract modes at a digital jukebox, nor were they reasonably pertinent to the particular problem with which the Patent Owner was concerned, and therefore are not analogous art.

‘575 Reexam Appeal Br. at 134 (emphasis in original).

97. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> The Examiner argues that she is not required to make a statement with respect to the level of ordinary skill in the art and that she only needs to review the prior art in order to determine the level of ordinary skill in the art and take into account knowledge which was within the level or ordinary skill in the art to make findings to establish a *prima facie* case of obviousness. *See* Exhibit G, June 15, 2009 Office Action, at 65. The Examiner, however, clearly did not take into account the knowledge of a person of skill in the art. The Examiner completely ignored the Declaration of Pat Rice, a person of skill in the art, and his testimony about how a person of skill in the art would have understood a jukebox to be different from a karaoke machine *Id.* Moreover, the Examiner apparently did not appreciate, from her review of the prior art, that a person of skill in the art would not have considered a karaoke machine, like that disclosed in Tsumura, to be a jukebox because karaoke machines were configured to receive and store small MIDI control data files, not large actual digitized song data files. Such oversights by the Examiner show that she did not truly determine the level of ordinary skill in the art and therefore was not able to properly analyze the claims and the prior art through the eyes of a person of ordinary skill in the art in 1992.

‘575 Reexam Appeal Br. at 53.

98. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The Examiner argues that she is not required to make a statement with respect to the level of ordinary skill in the art and that she only needs to review the prior art in order to determine the level of ordinary skill in the art and take into account knowledge which was within the level or ordinary skill in the art to make findings to establish a *prima facie* case of obviousness. *See* Exhibit G, June 15, 2009 Office Action, at 68. The Examiner, however, clearly did not take into account the knowledge of a person of skill in the art in 1992. The Examiner completely ignored the Declaration of Pat Rice, a person of skill in the art, and his testimony about how a person of skill in the art would have understood a jukebox to be different from a karaoke machine. *Id.* Moreover, the Examiner apparently did not appreciate, from her review of the prior art, that a person of skill in the art in 1992 would not have considered a karaoke machine to be a jukebox because karaoke machines were configured to receive and store small MIDI control data files, not large actual digitized song data files. Such oversights by the Examiner show that she did not truly determine the level of ordinary skill in the art and therefore was not able to properly analyze the claims and the prior art through the eyes of a person of ordinary skill in the art in 1992.

'575 Reexam Appeal Br. at 63-64.

99. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> The Examiner reiterates her argument that she is not required to make a statement with respect to the level of ordinary skill in the art and that she only needs to review the prior art in order to determine the level of ordinary skill in the art and take into account knowledge which was within the level or ordinary skill in the art to make findings to establish *a prima facie* case of obviousness. *See* Exhibit G, June 15, 2009 Office Action, at 72. The Examiner, however, clearly did not take into account the knowledge of a person of skill in the art in 1992. The Examiner completely ignored the Declaration of Pat Rice, a person of skill in the art, and his testimony about how a person of skill in the art would have understood a jukebox to be different from a karaoke machine. *Id.* Moreover, the Examiner apparently did not appreciate, from her review of the prior art, that a person of skill in the art in 1992 would not have considered a karaoke machine to be a jukebox because karaoke machines were configured to receive and store small MIDI control data files, not large actual digitized song data files. Such oversights by the Examiner show that she did not truly determine the level of ordinary skill in the art and therefore was not able to properly analyze the claims and the prior art through the eyes of a person of ordinary skill in the art in 1992.

'575 Reexam Appeal Br. at 79-80.

100. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> The Patent Owner respectfully disagrees with this characterization of the Rice Declaration. The Rice Declaration discusses numerous topics that have a nexus to the claimed invention. The Rice Declaration discusses limitations of the claimed invention and highlights claimed elements that would not have been integrated into a single computerized mechanism in 1992. The Rice Declaration presents evidence regarding the state of the art of many technical areas related to the claimed inventions in 1992 such as transmission speeds, computer memory storage capacity, and graphics. The Rice Declaration also discusses the differences between karaoke machines and jukeboxes in 1992, such as the fact that karaoke machines were not coin operated, were only used by a dedicated operator using a personal console, utilized different hardware, etc. Such differences are clearly relevant as they point to the state of the art of the terms being contested and show why a person of skill in the art at the time would not have considered jukeboxes and karaoke machines to be comparable devices. The Rice Declaration also discusses how a person or ordinary skill in the art would not have combined features to arrive at the claimed inventions of the '575 patent, and thus provides a further nexus to the claimed invention.
>
> Furthermore, the Rice Declaration is not just an "opinion" but is in fact the understanding of a person of skill in the art of coin operated machinery with respect to the components and operation of karaoke machines and jukeboxes. Therefore, his Declaration regarding what a person of skill understood the terms "karaoke machine" and "jukebox" to encompass in 1992 is important and should be considered because, though the "state of the art" in 1992 is not being contested, the meaning of the terms of the art in 1992 is being contested. The Rice Declaration is evidence, based on Mr. Rice's years of experience in the industry, that the Examiner's understanding of the terms like "jukebox," "karaoke machine," and "graphics" is incorrect. Accordingly, the Rice Declaration is effective, and the Examiner should be required to address the merits of Mr. Rice's statements regarding what a person of skill in the art in 1992 would have understood about jukeboxes, karaoke machines, digitized song data, and graphics.

‘575 Reexam Appeal Br. at 103-04.

101. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states: “Mr. Rice is a person of skill in the art, which the Examiner never disputes.” ‘575 Reexam Appeal Br. at 123.

102. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the ‘575 patent) states:

> Patent Owner respectfully disagrees with the assessment by the Examiner that certain claim terms may be disregarded or given no patentable weight. The terms at issue are not non-functional descriptive material. The phrase "digitized song data in a digitized song

> library" functionally affects the computer jukebox claimed in the '575 patent because, for example and as discussed *supra*, a song file stored in the jukebox requires significantly more space than the MIDI-like control information stored in Tsumura.

'575 Reexam Appeal Br. at 129.

103. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> All independent claims of the '575 Patent recite a "computer jukebox." Specifically, independent claim 1 is entirely directed to a computer jukebox, and requires that the song selector be "for determining from the song selections a selected digitized song to be played on the computer jukebox." Independent claim 9 requires that the processor be operative to "transmit the selected digitized song to a computer jukebox," and that it be operative to "transmit the associated song record to the computer jukebox through the at least one communication interface." Independent claim 15 requires "a plurality of computer jukeboxes for playing songs stored in a memory in the computer jukebox." Finally, independent claim 22 is directed entirely to a method for receiving and playing songs using a computer jukebox, and requires "receiving at the computer jukebox digitized song data and an associated song record," "storing the digitized song data and the song identity data in a memory in the computer jukebox," and "determining from the song selections a selected digitized song to be played on the computer jukebox based on input from a song selector."

'575 Reexam Resp. at 30-31.

104. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,097 (regarding the '575 patent) states:

> All independent claims of the '575 Patent also require, generally, receiving, transmitting and/or storing "digitized song data." Specifically, independent claim 1 requires a computer jukebox comprising "at least one communication interface for receiving digitized song data," "a memory storing the digitized song data," and "a processor" that is "operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data...in the memory." Independent claim 9 requires a central management system comprising "at least one communication interface for transmitting digitized song data," "a memory storing digitized song data," and "a processor operative to retrieve the selected digitized song data and transmit the selected digitized song data to a computer jukebox through the at least one communication interface." Independent claim 15 requires (1) a central management system comprising "at least one system communication interface for transmitting digitized song data," "a system memory storing digitized song data," and "a system processor operative to retrieve selected digitized song data and transmit the selected

> digitized song data to a computer jukebox through the at least one communication interface"; and (2) at least one computer jukebox comprising "at least one jukebox communication interface for receiving digitized song data," "a jukebox memory storing the digitized song data," and "a processor operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data...in the memory." Finally, independent claim 22 requires "receiving at the computer jukebox digitized song data," "storing the digitized song data...in a memory in the computer jukebox," and "retrieving digitized song data corresponding to the selected digitized song."

'575 Reexam Resp. at 32.

4. The Reexamination Proceedings Regarding the '398 Patent

105. In a section under the heading, "Background Of The '398 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> A person of ordinary skill in the art in 1996 would have understood the ordinary and customary meaning of "songs stored in said jukebox" and "signal representing a song" (from claim 1) to be stored audio signals of complete songs with music and vocals. Thus, the stored "songs" are not merely MIDI-like data from which sounds can be re-produced. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. *See* http://en.wikipedia.org/wiki/Musical Instrument Digital Interface. A person of ordinary skill in the art would have instead understood the "songs stored" in the computer jukebox and the "signal representing a song" of claim 1 of the '398 Patent to be song waveforms *(i.e.* audio signals) of complete songs of generally studio quality.

'398 Reexam Resp. at 18 (emphasis in original); *see id.* at 10-18.

106. In a section under the heading, "Background Of The '398 Patent," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> A person of ordinary skill in the art in 1996 would have understood the ordinary and customary meaning of "songs stored in said jukebox" and "signal representing a song" (from Claims 1 and 15), "library of songs" (from Claim 15) and "digital songs" (from Claim 17) to be stored audio signals of complete recorded songs with music and vocals. Thus, the stored "songs" are not merely MIDI-like data from which sounds can be re-produced on a synthesizer or by other electronic means. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. *See* http://en.wikipedia.org/wiki/Musical Instrument Digital Interface. A person of ordinary skill in the art would have instead understood the "songs stored in said jukebox," "library of songs," "digital songs," and the "signal representing a

> song" of the claims of the '398 Patent to be song waveforms *(i.e.* audio signals) of complete recorded songs of generally studio quality. *See, e.g.*, Exhibit A, '398 patent, at 1:16; 1:30-31; 1:36-38; 2:3-5; 2:6-17; and 8:30-32.

'398 Reexam Appeal Br. at 16 (emphasis in original); *see id.* at 8-16.

107. In a section under the heading, "Background Of The '398 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> Finally, storage capacity requirements for karaoke devices would have been very modest as compared to the typical jukebox, because karaoke machines needed to play only lower quality, instrumental backing music.[] For example, USPN 5,046,004 to Tsumura (cited in co-pending Reexamination no. 90/010,094) specifically allocates only 54 to 85 kilobytes to the instrumental music data used in that karaoke system, which would never accommodate complete songs. *See* Exhibit 1 (Declaration of Rice), at ¶ 10.

'398 Reexam Resp. at 14 (footnote omitted); *see id.* 10-14.

108. In a section under the heading, "Background Of The '398 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'398 Reexam Resp. at 14 n.4 (emphasis in original); *see id.* at 10-14.

109. In a section under the heading, "Background Of The '398 Patent," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> Finally, storage capacity requirements for karaoke devices were very modest as compared to the typical jukebox, because karaoke machines needed to play only lower quality, instrumental backing music.[] For example, USPN 5,046,004 to Tsumura (cited in co-pending Reexamination No. 90/010,094 of U.S. Pat. No. 6,397,189) specifically allocates only 54 to 85 kilobytes to the instrumental control data used in that karaoke system, which would never accommodate actual songs. *See* Exhibit N, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 10.

'398 Reexam Appeal Br. at 12 (footnote omitted); *see id.* at 8-12.

110. In a section under the heading, “Background Of The ‘398 Patent,” the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the ‘398 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

‘398 Reexam Appeal Br. at 12 n.49 (emphasis in original); *see id.* at 8-12.

111. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the ‘398 patent) states:

> Sone fails to teach any of the above limitations, because it only teaches a system that stores MIDI or MIDI-like instrumental music information, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See* Sone, at 2:48-60 ("In a practical form, the output means comprises sound synthesizer means for synthesizing an instrumental accompaniment of the karaoke even according to accompaniment information contained in the song data[.]"); *see also id.*, at 3:57-61 ("A tone generator 9 is provided for generating a tone signal according to the accompaniment information such as MIDI data contained in the song data."). Thus, no audio signal is ever stored in a memory of either the host computer or any individual karaoke machine of Sone. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1996 would have understood MIDI-like data as being entirely inconsistent with the "songs stored in said jukebox" of the '398 Patent. Accordingly, Sone cannot anticipate independent claim 1 for this additional reason.

‘398 Reexam Resp. at 23-24 (footnote omitted).

112. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the ‘398 patent) states:

> Sone fails to teach any of the above limitations, because it fails to teach a system for downloading or storing songs, as that term is properly construed. Instead, Sone teaches only a system that stores MIDI or MIDI-like instrumental music information, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See* Exhibit B, Sone, at 2:48-60 ("In a practical form, the output means comprises sound synthesizer means for synthesizing an instrumental accompaniment of the karaoke even according to accompaniment information contained in the song data[.]"); *see also id.*, at 3:57-61 ("A tone generator 9 is provided for generating a tone signal according to the accompaniment information such as MIDI data contained in the song data."). Thus, no audio signal is ever stored in a memory of either the host computer or any individual karaoke machine of Sone. As discussed *supra* with

> respect to claim construction, a person of ordinary skill in the art in 1996 would have understood MIDI-like data as being entirely inconsistent with the "songs stored in said jukebox," "song selected from a plurality of songs stored in said jukebox," "song data," "a signal representing a song," "a library of songs," and "storing digital songs" recited in the claims of the '398 Patent. Accordingly, Sone cannot anticipate independent Claims 1, 15, and 17 for this additional reason.

'398 Reexam Appeal Br. at 24.

113. The February 1, 2010 Reply Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> Patent Owner does not contend that a desktop computer in 1996 did not include a monitor, keyboard, modem, hard drive, and processor. Rather, Patent Owner's point about computer technology in 1996 is that large strides have been made since 1996 in computer memory, processing speeds, and digital communications. This understanding is relevant to Patent Owner's argument that a person of skill in the art in 1996 would not have thought to use computer technology with a jukebox in order to download large advertisement files to a jukebox, store song and advertisement files at the jukebox, and play the songs and advertisements at the jukebox, as claimed in the '398 patent, in view of the limitations in 1996 related to using computer technology to send, store, and process large files.

'398 Reexam Reply Br. at 4.

114. The February 1, 2010 Reply Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> That data stored in a computer memory is digital data consisting of 1s and 0s does not change the fact Sone does not teach or suggest "songs stored in said jukebox." Again, how the data is stored is not the issue. The issue is whether the data is "song" data, *i.e.*, audio signals of complete recorded songs. MIDI data, regardless of how they are stored, are not such data. MIDI data are control information for a synthesizer. The MIDI data stored in a karaoke machine as disclosed in Sone are not audio signals of complete recorded songs, and, therefore, Sone does not teach or suggest "songs stored in said jukebox." Furthermore, calling the data a "song" does distinguish the claimed invention because, as discussed above, data that are audio signals of complete recorded songs are different than data that are instructions for a synthesizer. Moreover, and at the very least, "song" data files are larger than MIDI data files and therefore take up more space to store and take longer to transmit and process. File size is an important consideration for operation of any kind of computerized device, especially one sending and receiving data from a remote source.

'398 Reexam Reply Br. at 15-16.

115. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> The Examiner argues that she is not required to make a statement with respect to the level of ordinary skill in the art and that she only needs to review the prior art in order to determine the level of ordinary skill in the art and take into account knowledge which was within the level or ordinary skill in the art to make findings to establish *a prima facie* case of obviousness. *See* Exhibit G, June 15, 2009 Office Action, at 39. The Examiner, however, clearly did not take into account the knowledge of a person of skill in the art. The Examiner completely ignored the Declaration of Pat Rice, a person of skill in the art, and his testimony about how a person of skill in the art would have understood a jukebox to be different from a karaoke machine. *Id.* Moreover, the Examiner apparently did not appreciate, from her review of the prior art, that a person of skill in the art would not have considered a karaoke machine, like that disclosed in Sone, to be a jukebox because karaoke machines were configured to receive and store small MIDI control data files, not large actual digitized song data files. Such oversights by the Examiner show that she did not truly determine the level of ordinary skill in the art and therefore was not able to properly analyze the claims and the prior art through the eyes of a person of ordinary skill in the art in 1996.

'398 Reexam Appeal Br. at 37.

116. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> The Patent Owner respectfully disagrees with this characterization of the Rice Declaration. The Rice Declaration discusses what a person of ordinary skill in the art would have understood to be the differences between karaoke machines and jukeboxes, and specifically how a karaoke machine would not have the storage space needed for a digitized song file. Contrary to the Examiner's summary dismissal, this is important evidence as to whether a person of skill in the art would have considered a karaoke machine to be a computer jukebox, and therefore the Rice Declaration clearly has a nexus to the claimed invention of a computer jukebox. Furthermore, the Rice Declaration is not just an "opinion" but is in fact the understanding of a person of skill in the art of coin operated machinery with respect to the components and operation of karaoke machines and jukeboxes. Therefore, his Declaration regarding what a person of skill understood the terms "karaoke machine" and "jukebox" to encompass in 1996 is important and should be considered because, though the "state of the art" in 1996 is not being contested, the meaning of the terms of the art in 1996 is being contested. The Rice Declaration is evidence, based on Mr. Rice's years of experience in the industry, that the Examiner's understanding of the terms "jukebox" and "karaoke machines" is incorrect. Accordingly, the Rice Declaration is effective, and the Examiner should be required to address the merits of Mr. Rice's statements regarding the differences between karaoke machines and jukeboxes.

'398 Reexam Appeal Br. at 61.

117. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> Patent Owner respectfully disagrees with the assessment by the Examiner that any claim terms may be disregarded or given little patentable weight. Regardless, the word "song" does functionally change the computer jukebox claimed in the '398 patent because, for example and as discussed *supra*, a song file stored in the jukebox requires significantly more space than the MIDI-like control information stored in Sone. Furthermore, the song is played by the jukebox.

'398 Reexam Appeal Br. at 76.

118. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> It may be that how songs are reproduced is not a critical feature in Sone, but disclosing a "song stored in said jukebox" is critical if Sone is to be used as a Section 102 prior art reference. Sone, however, simply does not anywhere disclose storing a song. Instead, Sone only discloses storing control information such as MIDI data and information for showing lyrics on a screen. *See* Exhibit B, Sone, at 2:48-60 ("In a practical form, the output means comprises sound synthesizer means for synthesizing an instrumental accompaniment of the karaoke even according to accompaniment information contained in the song data[.]"); at 3:57-61 ("A tone generator 9 is provided for generating a tone signal according to the accompaniment information such as MIDI data contained in the song data."); at 3:64-4:1 ("[T]he tone generator 9 functions as a sound synthesizer to synthesize the instrumental accompaniment, while the image controller 8 functions as an image synthesizer to synthesize the lyric characters according to the lyric information . . . ."). Even under the most generous definition of the word "song," such information cannot constitute a song. As such, Sone cannot anticipate the claims of the '398 patent.

'398 Reexam Appeal Br. at 74.

119. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> Because MIDI information consists of simple control data rather than a recorded analog waveform (or other representation) of a complete song, the required memory is extremely small.

'398 Reexam Resp. at 15.

120. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> All independent claims of the '398 Patent recite a "computer jukebox." Specifically, independent claim 1 is directed to a "computer jukebox capable of receiving and storing

> digital data representing a plurality of advertisements," and refers back to the computer jukebox of the preamble several times in the body of the claim. Independent claim 8 is directed to a "jukebox network," that comprises "a plurality of computer jukeboxes," and refers back to the computer jukebox of the preamble in the body of the claim.

'398 Reexam Resp. at 22.

121. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,147 (regarding the '398 patent) states:

> Sone fails to teach any of the above limitations, being directed solely to a karaoke machine system with significant features lacking vis-à-vis the computer jukebox claimed in the `398 Patent.[] As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1996 would have understood a karaoke machine to be different than the typical jukebox. Thus, the karaoke system of Sone would not teach to a person of ordinary skill in the art a "computer jukebox" with a "sophisticated audio production capability" that was a standalone unit operable solely by a patron, that included a money intake unit, and that played complete high-quality songs with original music and lyrics. Accordingly, Sone cannot anticipate independent claims 1 and 8 of the '398 Patent.

'398 Reexam Resp. at 22-23.

5. The Reexamination Proceedings Regarding the '834 Patent

122. In a section under the heading, "Background Of The '834 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> A person of ordinary skill in the art in 1999 would have understood the ordinary and customary meaning of "songs stored in said jukebox" (from claims 1 and 10) to be stored audio signals of complete songs with music and vocals. Thus, the stored "songs" do not include any MIDI-like music data. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. *See* http://en.wikipedia.orq/wiki/Musical Instrument Digital Interface. A person of ordinary skill in the art would have instead understood "songs stored" in the computer jukebox of claims 1 and 10 of the '834 Patent to be song waveforms *(i.e.* audio signals) of complete songs of studio quality. Similarly, "song data" (from claim 3) that is stored in "a programmable memory" of "a central management station" and stored in "a song storage location" of "a data storage unit" of "a computer jukebox," would have been understood to mean the data that constitutes digitized audio signals of complete songs of studio quality.

'834 Reexam Resp. at 14 (emphasis in original); *see id.* at 8-14.

123. In a section under the heading, "Background Of The '834 Patent," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> A person of ordinary skill in the art in 1999 would have understood the ordinary and customary meaning of "songs stored in said jukebox" (from Claims 1 and 10) to be stored audio signals of complete recorded songs with music and vocals. Thus, the stored "songs" do not include any MIDI-like music data. As discussed *supra*, MIDI data consists entirely and merely of control information used by a synthesizer for generating an audio signal output. *See* http://en.wikipedia.org/wiki/Musical Instrument Digital Interface. A person of ordinary skill in the art would have instead understood the "songs stored" in the computer jukebox of Claims 1 and 10 of the '834 patent to be song waveforms *(i.e.* audio signals) of recorded songs of studio quality. Similarly, "song data" (from Claim 3) that is stored in "a programmable memory" of "a central management station" and stored in "a song storage location" of "a data storage unit" of "a computer jukebox," would have been understood to mean data that constitutes digitized audio signals of complete recorded songs of studio quality. *See, e.g.*, Exhibit A, '834 patent, at 1:25-27; 1:39-40; 1:47-49; 2:12-26; and 8:42-46.

'834 Reexam Appeal Br. at 13-14 (emphasis in original); *see id.* 7-14.

124. In a section under the heading, "Background Of The '834 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> Finally, storage capacity requirements for karaoke devices would have been very modest as compared to the typical jukebox, because karaoke machines played only lower quality, instrumental background music.[] For example, USPN 5,046,004 to Tsumura (cited in co-pending Reexamination no. 90/010,094) specifically allocates only 54 to 85 kilobytes to the instrumental music data used in that karaoke system, which would never accommodate complete songs. *See* Exhibit 1 (Declaration of Rice), at ¶ 10.

'834 Reexam Resp. at 11 (footnote omitted); *see id.* at 8-11.

125. In a section under the heading, "Background Of The '834 Patent," the March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'834 Reexam Resp. at 11 n.3 (emphasis in original); *see id.* at 8-11.

126. In a section under the heading, "Background Of The '834 Patent," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> Finally, storage capacity requirements for karaoke devices were very modest as compared to the typical jukebox, because karaoke machines played only lower quality, instrumental background music.[] For example, USPN 5,046,004 to Tsumura (cited in co-pending Reexamination no. 90/010,094) specifically allocates only 54 to 85 kilobytes to the instrumental control data used in that karaoke system, which would never accommodate actual songs. *See* Exhibit I, March 18, 2009 Response, at Exhibit 1 (Declaration of Rice), at ¶ 10.

'834 Reexam Appeal Br. at 10 (footnote omitted); *see id.* at 7-10.

127. In a section under the heading, "Background Of The '834 Patent," the October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> No known prior art teaches or suggests a karaoke machine that provides full songs (*e.g.*, high-quality audio studio versions), as opposed to a relatively low-quality adaptation of the corresponding instrumental music.

'834 Reexam Appeal Br. at 10 n.43 (emphasis in original); *see id.* at 7-10.

128. The February 1, 2010 Reply Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> Patent Owner does not contend that a desktop computer in 1999 did not include a monitor, keyboard, modem, hard drive, and processor. Rather, Patent Owner's point about computer technology in 1999 is that large strides have been made since 1999 in computer memory, processing speeds, and digital communications. This understanding is relevant to Patent Owner's argument that a person of skill in the art in 1999 would not have thought to use computer technology with a jukebox in order to download large song and advertisement files to a jukebox, store the song and advertisement files at the jukebox, and play the songs and advertisements at the jukebox, as claimed in the '834 patent, in view of the limitations in 1999 related to using computer technology to send, store, and process large files.[]

'834 Reexam Reply Br. at 3 (footnote omitted).

129. The February 1, 2010 Reply Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> That data stored in a computer memory is digital data consisting of 1s and 0s does not change the fact Sone does not teach or suggest "song data" or "songs stored in said jukebox." Again, how the data is stored is not the issue. The issue is whether the data is "song" data, *i.e.*, audio signals of complete recorded songs. MIDI data, regardless of how they are stored, are not such data. MIDI data are control information for a synthesizer. The MIDI data stored in a karaoke machine as disclosed in Sone are not audio signals of complete recorded songs, and, therefore, Sone does not teach or suggest "song data" or "songs stored in said jukebox." Furthermore, describing data as "song data" does distinguish the claimed invention because, as discussed above, data that are audio signals of complete recorded songs are different than data that are instructions for a synthesizer. Moreover, and at the very least, "song data" files are larger than MIDI data files and therefore take up more space to store and take longer to transmit and process. File size is an important consideration for operation of any kind of computerized device, especially one sending and receiving data from a remote source.

'834 Reexam Reply Br. at 15.

130. The October 13, 2010 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> It may be that how songs are reproduced is not a critical feature in Sone, but disclosing a "song stored in said jukebox" is critical if Sone is to be used as a Section 102 prior art reference. Sone, however, simply does not anywhere disclose storing a song. Instead, Sone only discloses storing control information such as MIDI and information for showing lyrics on a screen. *See* Exhibit B, Sone, at 2:48-60 ("In a practical form, the output means comprises sound synthesizer means for synthesizing an instrumental accompaniment of the karaoke even according to accompaniment information contained in the song data[.]"); at 3:57-61 ("A tone generator 9 is provided for generating a tone signal according to the accompaniment information such as MIDI data contained in the song data."); at 3:64-4:1 ("[T]he tone generator 9 functions as a sound synthesizer to synthesize the instrumental accompaniment, while the image controller 8 functions as an image synthesizer to synthesize the lyric characters according to the lyric information …."). Even under the most generous definition of the word "song," such information cannot constitute a song. As such, Sone cannot anticipate the claims of the '834 patent.

'834 Reexam Appeal Br. at 55-56.

131. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> Sone fails to teach any of the above limitations, because it only teaches a system that stores MIDI or MIDI-like instrumental music information, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See* Sone, at 2:48-60 ("In a practical form, the output means comprises sound synthesizer means for synthesizing an instrumental accompaniment of the karaoke even

> according to accompaniment information contained in the song data[.]"); *see also id.*, at 3:57-61 ("A tone generator 9 is provided for generating a tone signal according to the accompaniment information such as MIDI data contained in the song data."). Thus, no audio signal is ever stored in a memory of either the host computer or the karaoke machine of Sone. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1999 would have understood MIDI-like data as being entirely inconsistent with the "songs stored in said jukebox" and the "song data" of the `834 Patent. Accordingly, Sone cannot anticipate any of independent claims 1, 3 and 10 for this additional reason.

'834 Reexam Resp. at 19.

132. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> Sone fails to teach any of the above limitations, because it fails to teach a system for downloading or storing songs, as that term is properly construed. Instead, Sone teaches only a system that stores MIDI or MIDI-like instrumental music information, which is then used to control a synthesizer in the karaoke machine in order to generate the instrumental notes of each song. *See* Exhibit B, Sone, at 2:48-60 ("In a practical form, the output means comprises sound synthesizer means for synthesizing an instrumental accompaniment of the karaoke even according to accompaniment information contained in the song data[.]"); *see also id.*, at 3:57-61 ("A tone generator 9 is provided for generating a tone signal according to the accompaniment information such as MIDI data contained in the song data."). Thus, no audio signal is ever stored in a memory of either the host computer or the karaoke machine of Sone. As discussed *supra* with respect to claim construction, a person of ordinary skill in the art in 1999 would have understood MIDI-like data as being entirely inconsistent with the "songs stored in said jukebox" and the "song data" of the '834 Patent. Accordingly, Sone cannot anticipate any of independent Claims 1, 3 and 10 for this additional reason.

'834 Reexam Appeal Br. at 20-21.

133. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> The Examiner argues that she is not required to make a statement with respect to the level of ordinary skill in the art and that she only needs to review the prior art in order to determine the level of ordinary skill in the art and take into account knowledge which was within the level or ordinary skill in the art to make findings to establish a *prima facie* case of obviousness. *See* Exhibit E, June 15, 2009 Office Action, at 23. The Examiner, however, clearly did not take into account the knowledge of a person of skill in the art. The Examiner completely ignored the Declaration of Pat Rice, a person of skill in the art, and his testimony about how a person of skill in the art would have understood a jukebox to be different from a karaoke machine *Id.* Moreover, the Examiner apparently did not appreciate, from her review of the prior art, that a person of skill in the art would not have considered a karaoke machine, like that disclosed in Sone, to be a jukebox because

> karaoke machines were configured to receive and store small MIDI control data files, not large actual digitized song data files. Such oversights by the Examiner show that she did not truly determine the level of ordinary skill in the art and therefore was not able to properly analyze the claims and the prior art through the eyes of a person of ordinary skill in the art in 1999.

'834 Reexam Appeal Br. at 30-31.

134. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> The Rice Declaration discusses what a person of ordinary skill in the art would have understood to be the differences between karaoke machines and jukeboxes, and specifically how a karaoke machine would not have the storage space needed for a digitized song file. Contrary to the Examiner's summary dismissal, this is important evidence as to whether a person of skill in the art would have considered a karaoke machine to be a computer jukebox, and therefore the Rice Declaration clearly has a nexus to the claimed invention of a computer jukebox. Furthermore, the Rice Declaration is not just an "opinion" but is in fact the understanding of a person of skill in the art of coin operated machinery with respect to the components and operation of karaoke machines and jukeboxes. Therefore, his Declaration regarding what a person of skill understood the terms "karaoke machine" and "jukebox" to encompass in 1999 is important and should be considered because, though the "state of the art" in 1999 is not being contested, the meaning of the terms of the art in 1999 is being contested. The Rice Declaration is evidence, based on Mr. Rice's years of experience in the industry, that the Examiner's understanding of the terms "jukebox" and "karaoke machines" is incorrect. Accordingly, the Rice Declaration is effective, and the Examiner should be required to address the merits of Mr. Rice's statements regarding the differences between karaoke machines and jukeboxes.

'834 Reexam Appeal Br. at 45-46.

135. The October 13, 2009 Appeal Brief submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> First, Patent Owner respectfully disagrees with the assessment by the Examiner that any claim terms may be disregarded or given little patentable weight. Regardless, the word "song" does functionally change the computer jukebox claimed in the '834 patent because, for example and as discussed *supra,* a song file stored in the jukebox requires significantly more space than the MIDI-like control information stored in Sone. Furthermore, the song is played by the jukebox.

'834 Reexam Appeal Br. at 58.

136. The March 18, 2009 Reexamination Office Action Response submitted to the PTO by Arachnid in connection with Reexamination Control No. 90/010,095 (regarding the '834 patent) states:

> All independent claims of the '834 Patent recite a "computer jukebox." Specifically, independent claim 1 is directed to a "computer jukebox receiving and storing digital advertisement data... from a remote source," and refers back to the computer jukebox of the preamble several times in the body of the claim. Independent claim 3 is directed to a "computer jukebox network," and requires "a computer jukebox remotely located from said central management system." Independent claim 10 is directed to a "computer jukebox receiving and storing advertisement data...from a remote central management system...," and refers back to the computer jukebox of the preamble in the body of the claim.

'834 Reexam Resp. at 17-18.

6. <u>The Rice Declaration</u>

137. Arachnid submitted a "Declaration of Patrick Rice," dated March 17, 2009, to the PTO in connection with the PTO's reexamination of the '189 patent (Reexamination Control No. 90/010,094), the '575 patent (Reexamination Control No. 90/010,097), the '398 patent (Reexamination Control No. 90/010,147) and the '834 patent (Reexamination Control No. 90/010,095). *See, e.g.*, Rice Decl. at 1, 7.

138. During the PTO's reexamination of each of the asserted patents, Arachnid repeatedly relied on the Rice Declaration in support of arguments it made to the PTO regarding the patentability of the asserted patents.

See, e.g., '189 Reexam Resp. at 14-15, 17; '189 Reexam Appeal Br. at 19-20, 23, 39, 98, 115; '575 Reexam Resp. at 16-17, 19-20; '575 Reexam Appeal Br. at 22-23, 25-26, 53, 63-64, 79-80, 103-04, 123; '398 Reexam Resp. at 14; '398 Reexam Appeal Br. at 12, 37, 61; '834 Reexam Resp. at 8-11; '834 Reexam Appeal Br. at 10, 30-31, 45-46.

139. In the March 17, 2009 Rice Declaration, Patrick Rice states:

> I am currently co-President of Arachnid, Inc. ("Arachnid"), owner of U.S. Patent Nos. 5,848,398 (the "'398 Patent"), 6,397,189 (the "'189 Patent"), 6,381,575 (the "'575 Patent"); and 6,970,834 (the "'834 Patent") (collectively, the "Arachnid Patents") now being reexamined by the Patent and Trademark Office ("PTO").

Rice Decl. ¶ 1.

140. In the March 17, 2009 Rice Declaration, Patrick Rice states:

> My C.V. is attached as Exhibit A hereto. I have been involved in the development and maintenance of new and existing coin-operated games and associated software for such games and machines since 1992, which included utility applications for electronic communications. Prior to that time, I was a Test Engineer in the controls industry, where I managed development and maintenance of software and associated hardware fixtures for new and existing products needed to test assembled printed circuit boards. I consider myself to be a person having average, or above average, skill in the art of coin-operated gaming and machines, including such games that utilize electronic and digital communications. I believe that I was a person having ordinary skill in that art in 1992 and prior.

Rice Decl. ¶ 2.

141. In the March 17, 2009 Rice Declaration, Patrick Rice states:

> I understand that:
>
> - The Arachnid Patents claim priority to U.S. Patent Application Serial No. 07/538,981, (the "'981 Application"), which was filed on June 15, 1990, and was later abandoned;
> - The '302 Patent is based on a continuation-in-part application of the '981 Application and was the first of the Arachnid Patents to issue; and
> - The '189 and '575 Patents are based on continuation applications of the '302 Patent application, and the '398 and '834 Patents are based on continuation-in-part applications of the '302 Patent application. The Arachnid Patents are all related to digital jukeboxes.

Rice Decl. ¶ 3.

142. The March 17, 2009 Rice Declaration explains that "studio quality" music requires a size-per-minute of around 10 megabytes per minute. Rice Decl. ¶ 10.

143. The March 17, 2009 Rice Declaration states:

> In 1992, a complete song of studio quality would have required at least (even for a short song) about 30MB of computer storage space because a stereo CD audio converted to WAV files takes around 10MB per one minute of stereo sound. Since most songs are between three and five minutes, taking a 600MB CD, somewhere between 12 and 20 songs could be stored on a CDROM in the WAV format.

Rice Decl. ¶ 10.

144. The March 17, 2009 Rice Declaration distinguishes the asserted patents from the prior based on the "studio quality" requirement of the asserted patents.

See, e.g., Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 17; '189 Reexam Appeal Br. at 23; '575 Reexam Resp. at 19-20; '575 Reexam Appeal Br. at 25-26; '398 Reexam Resp. at 14; '398 Reexam Appeal Br. at 12; '834 Reexam Resp. at 8-11; '834 Reexam Appeal Br. at 10.

145. The March 17, 2009 Rice Declaration states:

> It is my understanding that, in 1992, karaoke machines in public use were much different than jukeboxes. Karaoke machines generally were not coin-operated, and were operated not by patrons but by a dedicated operator using a personal console. Further, karaoke machines utilized different hardware to accomplish much different functions than jukeboxes. Karaoke machines were set up such that an operator could enter a code corresponding to a song requested by a user. Once the code was entered, by the operator, the background music of the song would play, and the words of the song would appear on a monitor for the user to see and sing along with. And karaoke machines used moveable speakers and microphones for the user to sing the song to an audience. Karaoke machines did not play studio-quality songs or music.

Rice Decl. ¶ 6.

146. The March 17, 2009 Rice Declaration states:

> 7. In 1992, I believe it was not well understood in the coin-op industry that the following components (which correspond to various claim elements of the various patents under reexamination), for instance, could, or should, be integrated into a single computerized mechanism:
>
> - a large capacity memory for storing, accessing and playing studio-quality audio;
> - at least one communication interface for receiving digitized song data and for receiving an associated song record, the song record including song identity data comprising at least one of a song title, a song category, song address, song size, graphics address, graphics size, and play count, or receiving user attract data or advertisement data, in compressed or uncompressed form;
> - a display adapted for presenting song selections based on the song identity data and a user attract mode, and/or advertisement data;
> - a song selector for determining from the song selections a selected digitized song to be played on the computer jukebox;
> - a processor operative to present on the display graphical data during a user attract mode and also displaying song selections based on song

> identity data, and operative to retrieve digitized song data corresponding to the selected digitized song, and operative to store the digitized song data and the song identity data received by the communication interface in the memory, or operative to store and process advertisement data or information about when and the number of times to display the advertisement data; and
>
> - a digital to analog converter to convert the digitized song data to an analog signal for the audio speaker.
>
> Processor speeds, storage requirements and limitations, telecommunication access and transmission rates, and technology reliability, among other things, were factors that were not nearly as well understood as they are today. I believe that integrating all of these technical features was beyond the state of the art in the coin-operated gaming industry in 1992.
>
> 8. Integrating these components together into a single computerized device in 1992 would not have been intuitive to the average person working in the coin-operated gaming industry because, for instance, the transfer of CDs to and from jukeboxes back then was purely physical. That is, CDs themselves generally could not be efficiently transferred via modem. Rather, a person had to physically, manually insert/remove CDs into/out of jukeboxes. Shifting to a new, disruptive paradigm where the contents on those CDs – the data – would be transferred via modem and telephone lines would not have been intuitive to a person of ordinary skill in the art. Additionally, this person with ordinary skill circa 1992 would have realized that based on the low bandwidth available then, and the extremely large amount of data contained on each CD even for one song, it would not have been something he or she was likely to attempt.

Rice Decl. ¶¶ 7, 8

147. The March 17, 2009 Rice Declaration states: "Handling (storing, transmitting, managing, etc.) large computer file sizes was a particular hurdle to overcome in 1992." Rice Decl. ¶ 11.

148. The music on TouchTunes' jukeboxes is not studio quality musical recordings under the definition provided by Mr. Rice in his March 17, 2009 Declaration. *See, e.g.*, Rice Decl. ¶¶ 6-8, 10, 11.

C. <u>Measuring Music Quality</u>

149. The quality of a musical recording is objective and quantitative in nature.

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02;

‘189 Reexam Reply Br. at 4; ‘575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; ‘575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; ‘575 Reexam Reply Br. at 4; ‘398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; ‘398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; ‘398 Reexam Reply Br. at 4, 15-16; ‘834 Reexam Resp. at 8-11 & n.3, 14, 19; ‘834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; ‘834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

150. Arachnid explained to the PTO that the quality of a musical recording is objective and quantitative in nature.

See, e.g., Rice Decl. ¶ 10; ‘189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; ‘189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; ‘189 Reexam Reply Br. at 4; ‘575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; ‘575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; ‘575 Reexam Reply Br. at 4; ‘398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; ‘398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; ‘398 Reexam Reply Br. at 4, 15-16; ‘834 Reexam Resp. at 8-11 & n.3, 14, 19; ‘834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; ‘834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11

151. The quality of a musical recording does not depend upon a listener’s subjective assessment of the music.

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* ‘189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; ‘189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; ‘189 Reexam Reply Br. at 4; ‘575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; ‘575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; ‘575 Reexam Reply Br. at 4; ‘398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; ‘398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; ‘398 Reexam Reply Br. at 4, 15-16; ‘834 Reexam Resp. at 8-11 & n.3, 14, 19; ‘834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; ‘834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

152. The quality of a musical recording depends upon the amount of data available in the song, per unit of time, to establish, for example, the dynamic range and clarity of the song.

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* ‘189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; ‘189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; ‘189 Reexam Reply Br. at 4; ‘575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; ‘575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; ‘575 Reexam Reply Br. at 4; ‘398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; ‘398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; ‘398 Reexam Reply Br. at 4, 15-16; ’834 Reexam Resp. at 8-11 & n.3, 14, 19; ‘834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; ‘834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11; Tooker Decl. ¶¶ 5-12.

153. The quality of a song can be measured or described in terms of the song’s size per minute of stereo sound (hereafter “size-per-minute”).

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11; Tooker Decl. ¶¶ 5-12.

154. Arachnid confirmed to the PTO that the quality of a song can be measured and described in terms of the song's size-per-minute of stereo sound.

See, e.g., Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11.

155. A song's size-per-minute is typically designated in units of megabytes ("MB") and defines how much music information is available for each minute of the song. *See, e.g.*, Rice Decl. ¶ 10; Ramone Decl. ¶ 9

156. The more information that is available for each minute of a song, the higher the quality of the resulting music.

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 10, 11; Tooker Decl. ¶¶ 5-12.

157. A music file having a high size-per-minute of 10 MB has 10 megabytes of data for each minute of the song. *See, e.g.*, Ramone Decl. ¶ 9; *see also* Rice Decl. ¶ 10.

158. A music file having a low size-per-minute of 1 MB has only 1 megabyte of data for each minute of the song. *See, e.g.*, Ramone Decl. ¶ 9; *see also* Rice Decl. ¶ 10.

159. A music file having a size-per-minute of 1 MB is much lower in music quality music than a music file having a size-per-minute of 10 MB.

See, e.g., Ramone Decl. ¶¶ 8-15; Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 21, 39; '189 Reexam Appeal Br. at 27, 52, 60; '575 Reexam Resp. at 15-20 & n.5, 21-23, 40, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 55, 60, 106-07, 116, 134; '398 Reexam Resp. at 14 & n.4, 18; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16; '834 Reexam Resp. at 8-11 & n.3, 14; '834 Reexam Appeal Br. at 10 & n.43, 13-14; Tooker Decl. ¶¶ 5-12.

160. A song's size-per-minute also directly impacts the song's overall size.

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 21, 39; '189 Reexam Appeal Br. at 27, 52, 60; '575 Reexam Resp. at 15-20 & n.5, 21-23, 40, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 55, 60, 106-07, 116, 134; '398 Reexam Resp. at 14 & n.4, 18; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16; '834 Reexam Resp. at 8-11 & n.3, 14; '834 Reexam Appeal Br. at 10 & n.43, 13-14; Tooker Decl. ¶¶ 5-12.

161. The more data available for each minute of a song, the larger the music file.

See, e.g., Ramone Decl. ¶¶ 8-11; Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 21, 39; '189 Reexam Appeal Br. at 27, 52, 60; '575 Reexam Resp. at 15-20 & n.5, 21-23, 40, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 55, 60, 106-07, 116, 134; '398 Reexam Resp. at 14 & n.4, 18; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16; '834 Reexam Resp. at 8-11 & n.3, 14; '834 Reexam Appeal Br. at 10 & n.43, 13-14; Tooker Decl. ¶¶ 5-12.

162. A complete three-minute song having a size-per-minute of 10 MB would require about 30 megabytes of storage space. The same song having a size-per-minute of 1 MB would require only about 3 megabytes of storage space. *See, e.g.*, Rice Decl. ¶ 10; Ramone Decl. ¶ 10.

163. "Studio quality" music has a size-per-minute of at least 10.1 MB. *See, e.g.*, Ramone Decl. ¶¶ 10-11; Rice Decl. ¶ 10.

164. "Studio quality" music can have sizes-per-minute as high as 66 MB. Ramone Decl. ¶ 11.

165. In distinguishing the prior art, Arachnid confirmed that "studio quality" songs – and thus all asserted claims – require the songs to "take[] around 10MB per one minute of stereo sound." Rice Decl. ¶ 10; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3,

14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6-8, 11.

166. From the time audio CDs became commercially available in the early 1980s through today, songs stored on CDs have had a size-per-minute of 10.1 MB. *See, e.g.*, Ramone Decl. ¶ 11.

167. Studio quality songs are extremely large.

See, e.g., Rice Decl. ¶¶ 7, 8, 10; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6, 11; Ramone Decl. ¶¶ 8-14; Tooker Decl. ¶¶ 5-12.

168. The extremely large size of studio quality songs negatively impacts the amount of space required to store the songs, as well as the amount of time required to download the songs.

See, e.g., Rice Decl. ¶¶ 7, 8, 10; *see also* Ramone Decl. ¶¶ 8-14; Tooker Decl. ¶¶ 5-12; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Rice Decl. ¶¶ 6, 11.

169. If maintaining studio quality of a song is not a concern, techniques are available for reducing the amount of data in a music file and thereby reducing the amount of space required to store the songs, as well as the amount of time required to transmit the songs. *See, e.g.*, Ramone Decl. ¶ 12; Tooker Decl. ¶¶ 5-12.

170. Compression of a music file reduces the song's size-per-minute, and thereby reduces its quality. *See, e.g.*, Ramone Decl. ¶¶ 12-14; Tooker Decl. ¶¶ 5-6.

171. One technique for compressing music is "MPEG-1 Audio Layer 3," which is more commonly known as "MP3." *See, e.g.*, Ramone Decl. ¶ 12; Tooker Decl. ¶ 5.

172. MP3 is a "lossy" compression technique and therefore results in the removal of data during compression. *See, e.g.*, Ramone Decl. ¶¶ 12-14; *see also* Tooker Decl. ¶ 5-6.

173. The loss of data during MP3 compression results in a significant reduction in music quality.

See, e.g., Ramone Decl. ¶¶ 8-15; Tooker Decl. ¶¶ 5-6, 11; *see also* Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58 (attached as Exh. 30).

174. When a studio quality musical recording is compressed to the MP3-128 format, its size-per-minute is reduced by about 90%, from 10.1 MB to 0.94 MB. *See, e.g.*, Ramone Decl. ¶¶ 8-14; Tooker Decl. ¶¶ 5-6, 11.

175. An MP3-128 song has a size-per-minute that is less than one-tenth that of a studio quality musical recording. *See, e.g.*, Ramone Decl. ¶¶ 13-14; Tooker Decl. ¶¶ 5-6, 11.

176. About 90% of the information contained in the studio quality version of the song is removed when the song is compressed to the MP3-128 format. *See, e.g.*, Ramone Decl. ¶¶ 13-14; Tooker Decl. ¶¶ 5-6, 11.

177. An MP3-128 version of a song is about 90% smaller than the studio quality version of the song. *See, e.g.*, Ramone Decl. ¶¶ 13-14; Tooker Decl. ¶¶ 5-6, 11.

178. An MP3-128 song is not the same as, or anywhere close to, a studio quality musical recording.

See, e.g., Ramone Decl. ¶¶ 2, 8-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶¶ 5-6, 11.

179. An MP3-128 song is not a studio quality song, let alone a complete studio quality song.

See, e.g., Ramone Decl. ¶¶ 2, 8-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-

16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶¶ 5-6, 11.

180. In prior litigation between Arachnid and Ecast, Inc. in the Northern District of Illinois, Arachnid acknowledged that the loss of data through compression results in a loss of music quality.

See Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

181. Arachnid's Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment in prior litigation between Arachnid and Ecast, Inc. states:

> 58. Those of ordinary skill in the art knew in 1992 that compression was a solution to slow download speeds. (Dickinson Deposition at 363:9-13 (Exh. 34); Meldal Decl. at ¶ 7).
>
> RESPONSE
>
> Plaintiffs dispute Defendants' contentions in DSMF ¶ 58 to the extent that they are incomplete, vague, and impermissibly use hindsight to add compression. [Ex. E at 383:12-386:6.] One of ordinary skill would know that there are trade-offs relating to the use of compression (i.e., the sacrifice of quality for download speed, and vice versa), and that those trade-offs may not be acceptable to the hypothetical one of ordinary skill. [See Ex. E at 256:10-15; 364:11-21.]

Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

D. TouchTunes' Products

182. Arachnid asserts that TouchTunes infringes U.S. Patent No. 6,397,189 by virtue of the following accused products: Allegro; Allegro MX-1; Allegro MX-1v; Genesis II; Maestro; Maestro II; Ovation; Ovation II; Rhapsody; and "TouchTunes Network" (identified as including, at least, workstations, servers and TouchTunes jukeboxes).

See Arachnid, Inc.'s Supplemental Responses to TouchTunes Music Corp.'s First Set of Interrogatories Nos. 1-37 at 12-21 (attached as Exh. 31).

183. Arachnid asserts that TouchTunes infringes U.S. Patent No. 6,381,575 by virtue of the following accused products: Allegro; Allegro MX-1; Allegro MX-1v; Genesis II; Maestro; Maestro II; Ovation; Ovation II; Rhapsody; and "TouchTunes Network" (identified as including, at least, workstations, servers and TouchTunes jukeboxes).

See Arachnid, Inc.'s Supplemental Responses to TouchTunes Music Corp.'s First Set of Interrogatories Nos. 1-37 at 21-35.

184. Arachnid asserts that TouchTunes infringes U.S. Patent No. 5,848,398 by virtue of the following accused products: Allegro; Allegro MX-1; Allegro MX-1v; Genesis II; Maestro; Maestro II; Ovation; Ovation II; Rhapsody; "TouchTunes Network" (identified as including, at least, workstations, servers and TouchTunes jukeboxes); and "Gen 3 TouchTunes jukeboxes communicating with the TouchTunes server over a cellular network."

See Arachnid, Inc.'s Supplemental Responses to TouchTunes Music Corp.'s First Set of Interrogatories Nos. 1-37 at 6-12.

185. Arachnid asserts that TouchTunes infringes U.S. Patent No. 6,970,834 by virtue of the following accused products: Allegro; Allegro MX-1; Allegro MX-1v; Genesis II; Maestro; Maestro II; Ovation; Ovation II; Rhapsody; "TouchTunes Network" (identified as including, at least, workstations, servers and TouchTunes jukeboxes); "TouchTunes network including a PlayPorTT"; and "Gen 3 TouchTunes jukeboxes connected to a PlayPorTT."

See Arachnid, Inc.'s Supplemental Responses to TouchTunes Music Corp.'s First Set of Interrogatories Nos. 1-37 at 35-45.

186. No TouchTunes product, including any of the products that Arachnid accuses of infringement and regardless of software generation, has downloaded, stored or played any studio quality musical recording.

See, e.g., Tooker Decl. ¶¶ 5, 12; *see also* Tooker Decl. ¶¶ 6-11; Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

187. TouchTunes' jukeboxes do not download studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 5-12; Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 &

n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

188. TouchTunes' jukeboxes do not store studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 5-12; Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

189. TouchTunes' jukeboxes do not play studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 5-12; Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

190. No TouchTunes jukebox is capable of playing studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 5-6, 11; Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

191. Before any music can be introduced into and used in TouchTunes' jukebox system, the music must first be compressed to a size-per-minute of 0.94 MB using a technique called MPEG-1 Audio Layer 3. The resulting music is in a format known as "MP3-128." *See, e.g.*, Tooker Decl. ¶ 5; Ramone Decl. ¶¶ 8-13.

192. In order to reduce file transmission times and storage consumption, all of the music transferred to and stored on all of TouchTunes' jukeboxes has been converted to the MP3-128 format. *See, e.g.*, Tooker Decl. ¶¶ 5-11; Ramone Decl. ¶¶ 13-14.

193. As the music is converted to the MP3-128 format for use in TouchTunes' system, it is compressed to a size-per-minute of 0.94 MB. *See, e.g.*, Tooker Decl. ¶ 5; Ramone Decl. ¶¶ 13-14.

194. The MP3-128 song is transmitted to and stored in TouchTunes' jukeboxes in an encrypted format for security purposes. Throughout the encryption (and subsequent decryption) processes, the song remains an MP3-128 song. *See, e.g.*, Tooker Decl. ¶ 7; Ramone Decl. ¶ 13.

195. Early on, TouchTunes recognized that the extremely large size of studio quality songs negatively impacts the amount of space required to store the songs, as well as the amount of time required to download the songs. In view of these drawbacks to using studio quality songs, TouchTunes consciously decided not to use studio quality songs in its jukebox system. *See, e.g.*, Tooker Decl. ¶¶ 8-12.

196. TouchTunes consciously chose not to use studio quality music in its jukebox system for at least two important reasons. *See, e.g.*, Tooker Decl. ¶¶ 8-11.

197. TouchTunes strives to offer its customers the largest selection of music possible on each jukebox. *See, e.g.*, Tooker Decl. ¶ 8.

198. The complete database of music available on the TouchTunes' system is stored in a database at TouchTunes' facilities in Montreal, Canada, and a subset of that music is stored in a computer memory on each jukebox. *See, e.g.*, Tooker Decl. ¶ 8.

199. Because studio quality music requires very large amounts of computer memory to store each song (at least about 30MB of memory for a typical three-minute song), TouchTunes decided to design its jukebox system in a way that avoided the use of studio quality songs.

See, e.g., Tooker Decl. ¶¶ 8-11; *see also* Ramone Decl. ¶¶ 9-11; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

200. TouchTunes decided to use music files that are compressed to the MP3-128 format in order to maximize the number of songs that TouchTunes can store on its jukeboxes without requiring excessively large and expensive memories. *See, e.g.*, Tooker Decl. ¶ 8.

201. Because conversion of a studio quality song to the MP3-128 format removes large amounts of data from the song, the quality of an MP3-128 music song is far less than that of a studio quality musical recording.

See, e.g., Tooker Decl. ¶¶ 5-6, 8, 11; Ramone Decl. ¶¶ 10-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

202. TouchTunes elected to forego any use of studio quality musical recordings in favor of smaller files and lower quality music.

See, e.g., Tooker Decl. ¶¶ 5-12; Ramone Decl. ¶¶ 11-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

203. Each MP3-128 song on TouchTunes' system requires only about $1/10^{th}$ the storage space of a corresponding studio quality song. *See, e.g.*, Tooker Decl. ¶¶ 5-6, 9, 11; Ramone Decl. ¶¶ 10-15; Rice Decl. ¶ 10.

204. TouchTunes decided to trade music quality for the ability to store much more music on each jukebox.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; Ramone Decl. ¶¶ 5-6, 8-12; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37,

61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

205. TouchTunes also decided not to use studio quality songs in its jukebox system because it wanted to be able to transmit songs quickly from its Montreal facility to each individual jukebox, even if there is no high-speed connection available at the jukebox location. *See, e.g.*, Tooker Decl. ¶¶ 10-11.

206. When designing its system, TouchTunes was aware that many of its potential jukebox customers only had a low-speed data connection, such as dial-up connections, at the jukebox location. *See, e.g.*, Tooker Decl. ¶¶ 10-11.

207. TouchTunes decided that studio quality songs were too large to be downloaded quickly to its jukeboxes over a low-speed connection. *See, e.g.*, Tooker Decl. ¶¶ 10-11.

208. One reason for TouchTunes' decision not to use studio quality songs is that many of TouchTunes' potential jukebox customers only had a low-speed data connection, such as dial-up connections, at the jukebox location. *See, e.g.*, Tooker Decl. ¶¶ 10-11.

209. In order to avoid excluding potential customers simply because they were limited to a low-speed data connection, TouchTunes decided that it would not use any studio quality songs in its system. TouchTunes decided to limit the operation of its jukeboxes to songs having lower music quality. *See, e.g.*, Tooker Decl. ¶¶ 10-11.

210. The lower size-per-minute, and resulting lower quality, provided by the MP3-128 format enables much faster downloads as compared to studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 10-11; Ramone Decl. ¶¶ 8-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

211. By using MP3-128 songs, all of TouchTunes' customers are able to quickly download songs from TouchTunes' Montreal database, regardless of the type of connection that is available at the jukebox location. *See, e.g.*, Tooker Decl. ¶¶ 10-11.

212. Today, TouchTunes has a significant customer base that relies on low-speed connections to download music from TouchTunes' Montreal facility. This customer base would not be possible if TouchTunes used studio quality songs. *See, e.g.*, Tooker Decl. ¶ 10.

213. TouchTunes elected to use MP3-128 songs, which are far smaller in size and require much less time to download than studio quality songs.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; Ramone Decl. ¶¶ 11-15; *see also* Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

214. The trade-off in using MP3-128 songs is that their music quality is far lower than that of studio quality songs.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; Ramone Decl. ¶¶ 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

215. In order to accommodate customers having slow data connections, TouchTunes decided to use music that is only about 1/10th the size of studio quality musical recordings and that is much lower in quality.

See, e.g., Tooker Decl. ¶¶ 10-11; Ramone Decl. ¶¶ 11-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe

& Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

216. TouchTunes has traded music quality in favor of smaller song files having reduced storage requirements and faster download capability.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-11; Ramone Decl. ¶¶ 11-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

217. TouchTunes has never used any studio quality musical recording on any of its products, including its jukeboxes.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; *see also* Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

218. No TouchTunes jukebox has ever downloaded, stored or played any studio quality musical recording.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; *see also* Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

219. The MP3-128 music of TouchTunes' jukeboxes has a size-per-minute of only 0.94 MB.

See, e.g., Tooker Decl. ¶¶ 5-6, 11; Ramone Decl. ¶¶ 13-14.

220. TouchTunes decided to use songs of much lower quality, known as MP3-128 songs, in order to minimize the storage space needed to store the songs on the jukeboxes, as well as to reduce the amount of time required to transmit songs to its jukeboxes. *See, e.g.*, Tooker Decl. ¶¶ 5-6, 8-12; *see also* Ramone Decl. ¶¶ 11-15.

221. By using music having a size-per-minute that is only one-tenth that of studio quality songs, TouchTunes' system relies on non-studio quality songs – the same prior art feature that Arachnid expressly distinguished at the PTO and excluded from the scope of its patents.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; Ramone Decl. ¶¶ 11-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

222. The size-per-minute of the MP3-128 song used in TouchTunes' jukebox system is less than one-tenth that of the 10 MB required to constitute a studio quality song.

See, e.g., Tooker Decl. ¶¶ 5-6, 11; Ramone Decl. ¶¶ 11-14; Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

223. The MP3-128 song has such a small size-per-minute because the compression process removes vast amounts of data from the original version of the song.

See, e.g., Ramone Decl. ¶¶ 11-14; Tooker Decl. ¶¶ 5-6, 9, 11; *see also* Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

224. In the case of converting a studio quality song to the MP3-128 format, about 90% of the data contained in the studio quality version of the song is removed. *See, e.g.*, Ramone Decl. ¶¶ 5-6, 11, 13, 14; Tooker Decl. ¶¶ 5-6, 9, 11.

225. As Arachnid itself recognizes, the loss of data brings with it the loss of quality. *See, e.g.*, Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58; Ramone Decl. ¶¶ 2, 11-15; Tooker ¶¶ 5-6, 8-12.

226. In choosing not to use studio quality songs, TouchTunes traded the quality of its music for reduced storage requirements and faster download speeds. In this manner, TouchTunes' system is similar to the prior art that Arachnid expressly distinguished in the reexamination proceedings. *See, e.g.*, Tooker Decl. ¶¶ 5-6, 8-11; Ramone Decl. ¶ 2, 11-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

227. TouchTunes declined to use studio quality songs for the same reasons as the prior art distinguished by Arachnid – "[i]n order to avoid large storage or bandwidth requirements." '189 Reexam Resp. at 29, 40-41; '189 Reexam Appeal Br. at 37, 53; '575 Reexam Resp. at 30, 37, 41; '575 Reexam Appeal Br. at 40, 51, 56; *see* Tooker Decl. ¶¶ 5-6, 8-11; Ramone Decl. ¶¶ 11-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

E. TouchTunes Does Not Infringe Any Claim of Any Asserted Patents

228. By way of its agreed claim construction and the patentability arguments it made during the reexamination proceedings, Arachnid has expressly conceded that all asserted claims are limited to jukeboxes that use studio quality musical recordings.

See, e.g., Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

229. During reexamination of the asserted patents, and with respect to each of the asserted patents, Arachnid disclaimed any claim scope that would encompass any jukebox that does not use studio quality musical recordings.

See, e.g., Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

230. By expressly conceding that all asserted claims are limited to jukeboxes that use studio quality musical recordings, Arachnid has admitted that a jukebox cannot infringe any asserted claim if that jukebox does not use studio quality musical recordings.

See, e.g., Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

231. No TouchTunes jukebox (or any other TouchTunes product) has used studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 5-12; *see also* Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

232. Arachnid has known since at least October 2009 that TouchTunes' accused products use MP3 music files (or the encrypted counterparts to the MP3 files). *See, e.g.*, Trans. of Oct. 7, 2009 Dep. of Dominique Dion at 29-30, 64 (attached as Exh. 32).

233. Arachnid has known since at least October 2009 that no accused TouchTunes product uses studio quality musical recordings. *See, e.g.*, Trans. of Oct. 7, 2009 Dep. of Dominique Dion at 29-30, 64.

234. Arachnid has known since at least October 2009 that no accused TouchTunes jukebox uses studio quality musical recordings. *See, e.g.*, Trans. of Oct. 7, 2009 Dep. of Dominique Dion at 29-30, 64.

235. The size-per-minute of TouchTunes' MP3-128 music is about 90% less than that required by the patents.

See, e.g., Tooker Decl. ¶¶ 5-6, 11; Ramone Decl. ¶¶ 2, 11-15; *see also* Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

236. TouchTunes' jukeboxes do not download, store or play studio quality musical recordings.

See, e.g., Tooker Decl. ¶¶ 5-6, 8-12; Ramone Decl. ¶¶ 2, 8-15; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15.

237. The 0.94 MB size-per-minute of MP3-128 music is less than one-tenth that of the 10 MB required by the claimed "studio quality musical recordings."

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶¶ 5-6, 11.

238. Music compressed to a size-per-minute of 0.94 MB cannot reasonably be considered to be "studio quality."

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶¶ 5-6, 8-12.

239. Music compressed to a size-per-minute of 0.94 MB cannot reasonably be considered to be equivalent to "studio quality" music.

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶ 5-6, 8-12.

240. No reasonable person could conclude that the music used by TouchTunes' jukeboxes constitutes, or even approximates, a studio quality musical recording.

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶¶ 5-6, 8-12.

241. No reasonable person could conclude that the music downloaded to, stored in or played by TouchTunes' jukeboxes constitutes a studio quality musical recording, or even an equivalent to a studio quality musical recording.

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Rice Decl. ¶¶ 6-8, 10, 11; *see also* '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Tooker Decl. ¶¶ 5-6, 8-12.

242. In order to reduce storage consumption and to shorten transmission times, TouchTunes has accepted a level of music quality in its products that is far less than studio quality.

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Plaintiffs' [Rowe & Arachnid] Response in Opposition to Defendants' Statement of Material Facts in Support of Defendants' Motion for Summary Judgment (N.D. Ill.) at 26 ¶ 58.

243. TouchTunes' jukeboxes do not include the most fundamental requirement of every patent claim asserted by Arachnid – the use of studio quality musical recordings.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of

Correction; Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12.

244. Because TouchTunes jukeboxes do not download, store, play or otherwise use any studio quality musical recording, there can be no literal infringement of any asserted patent by any accused product in this case.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of Correction; Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12.

245. Because TouchTunes jukeboxes do not download, store, play or otherwise use any studio quality musical recording, and because Arachnid has disclaimed coverage of any song having a size-per-minute less than 10 MB, there can be no infringement of any asserted patent by any accused product in this case under the doctrine of equivalents.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of Correction; Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7 Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834

Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12.

246. Because TouchTunes jukeboxes do not download, store, play or otherwise use any studio quality musical recording, any finding of equivalence between the claimed use of studio quality musical recordings and the use of music in any accused product in this case would vitiate the entire "studio quality" limitation of the claims.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of Correction; Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12.

247. TouchTunes' jukeboxes do not have the studio quality features that Arachnid identified as "critical."

See, e.g., Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12; '189 Reexam Appeal Br. at 101-02; '575 Reexam Appeal Br. at 106-07; '398 Reexam Appeal Br. at 74; '834 Reexam Appeal Br. at 55-56; '834 Reexam Resp. at 14; *see also* Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 & n.89, 24-27, 37, 39, 44, 52, 53, 60, 98; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 58; '834 Reexam Reply Br. at 3, 15.

248. Because TouchTunes does not satisfy each patent's requirement for studio quality musical recordings, at least one fundamental requirement of every claim of every asserted patent is missing from all of the accused TouchTunes products.

See, e.g., '189 patent (claims) & Certificate of Correction; '575 patent (claims) & Certificate of Correction; '398 patent (claims) & Certificate of Correction; '834 patent (claims) & Certificate of Correction; Defendant Arachnid's Opening Claim Construction Mem. at 6 & n.3, 7; Defendant Arachnid's Response to TouchTunes' Opening Claim Construction Brief at 2; Rice Decl. ¶¶ 6-8, 10, 11; '189 Reexam Resp. at 13-17 & n.5, 18-21, 29, 33-34, 39-41; '189 Reexam Appeal Br. at 18-23 &

n.89, 24-27, 37, 39, 44, 52, 53, 60, 98, 101-02; '189 Reexam Reply Br. at 4; '575 Reexam Resp. at 15-20 & n.5, 21-23, 30, 32, 40, 41, 44; '575 Reexam Appeal Br. at 21-26 & n.129, 27-30, 40, 43-44, 51, 53, 55, 56, 60, 63-64, 79-80, 103-04, 106-07, 116, 129, 134; '575 Reexam Reply Br. at 4; '398 Reexam Resp. at 10-14 & n.4, 15-18, 22-24; '398 Reexam Appeal Br. at 8-12 & n.49, 13-16, 24, 37, 61, 74, 76; '398 Reexam Reply Br. at 4, 15-16; '834 Reexam Resp. at 8-11 & n.3, 14, 19; '834 Reexam Appeal Br. at 10 & n.43, 13-14, 20-21, 30-31, 45-46, 55-56, 58; '834 Reexam Reply Br. at 3, 15; Ramone Decl. ¶¶ 2, 8-15; Tooker Decl. ¶¶ 5-6, 8-12.

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